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The Builder.

VOL. XXXIX. No. 1955. SATURDAY, JULY 24, 1880.

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More Gas Explosions.

WORKMEN'S EDUCATION.

THE one of those coincidences which so frequently occur, as if in mockery of the calculus of probabilities, the same daily journals that reported the verdict of the coroner's jury as to the death of the two men who were killed on the 5th current by the explosion in Tottenham-court-road, contained also an account of two explosions which took place on the 13th current at Bilston, near Wolverhampton, as briefly noticed in our last number. The importance of the warning, which we gave in the same number, of the danger arising from the effect of street traffic on the unprotected joints of the gas-pipes, has thus received an emphatic confirmation.

Although unaccompanied by any loss of life or personal damage, the Bilston explosion points to a graver source of possible danger than did the London catastrophe. It is graver in this respect,—it is one which cannot be said to be unlikely to recur elsewhere. The laying of a large main, not as an altogether new work, but as replacing former communication, is, as we pointed out, a matter of rare occurrence. It is one as to which the terrible warning of the 5th of July is calculated to suggest due precaution for the future. But the same thing cannot be predicated of the escape of gas into a sewer. All the elements of danger occur in such a case, with the sole exception that the introduction of a light is unlikely. But undetected leakage, slow accumulation of unsuspected gas, formation of explosive mixture,—all these things may occur, and probably do occur, far oftener than we have any notion, in sewers. In any such case we are at the mercy of a chance spark, and how far a chain of explosions thus originated may extend no one is able to say.

In the Bilston case, as in that in London, the flame travelled down the conduit which contained the explosive mixture, firing the same in successive places. A second explosion took place at three in the afternoon, five hours after the first. But we apprehend that there can be little doubt that the second was so far independent of the first, that it must have arisen from a fresh lighting of the gas from some external source. The great lesson to be learned, in each case, is that danger is not to be avoided by closing our eyes. A leak is not stopped by being buried in the ground. A sewer is not made safe by being left unventilated. On the contrary, a new reason for the ventilation and inspection of sewers is afforded by the revelation of a source of danger not hitherto unknown, but too little thought of. In the case of a sewer which, in addition to that sewer gas which is the carrier of typhoid fever, contains any serious amount of carburetted hydrogen gas,—the very means taken to effect ventilation, unless perfect, might cause wholesale destruction.

The more essential is it that gas-mains should be so laid as to be undisturbed by traffic, and to be easy of inspection from time to time. The great advantage, as a matter of safety, which coal-gas possesses in its odious and permeating smell, is neutralised by the burial of the pipes beneath the road. It may be doubted whether that saturation of the earth with gas of which some witnesses speak is not somewhat fanciful. But there can be no doubt as to the danger of the existence of any conduits, caves, cellars, or other hollow spaces into which it is possible for leaking gas to make its way, without either suspicion or supervision.

Another lesson may be drawn from the verdict of the jury, in the London case. We referred before to the very straightforward evidence of Hawkes. The jury say that the explosion was caused by a light being ignorantly placed to a pipe by this witness. As we understand the verdict, it means that Hawkes was totally unaware of the danger caused by so doing. No doubt this was the case. But what are we to say of the technical education of the working man, when we find that a foreman of gasfitters was utterly unacquainted with the rudimentary fact that a mixture of hydrogen and of oxygen is explosive? Do not let us be deceived by the use of the word "technical." It does not mean, rightly understood, an education above the wants of the people. It means a sound practical education, giving proper instruction as to the rudimentary facts of the business in which the workman is to be engaged. In this, we greatly fear, our workmen, as a rule, are very deficient.

We take it that the ignorance of the workman arises, to a very great extent, from the fact of the changes which are so constantly occurring in the social relations amongst us, owing chiefly to the growth of population. In old times each craft was also a mystery. The master of the craft hesitated to commit to writing the secrets of the trade, even if he could write or read. In the most ancient and venerable of brotherhoods, such record was distinctly forbidden. As far back as we can trace the organisation of society, this idea of mystery has been present. The sole means of entrance to a craft was by apprenticeship. Three or four hundred years ago, if one of those popular handbooks, which now profess to teach almost every science and any art which can be pursued by man, could have been written it would have been burned by the common hangman, and its author would have been lucky if he escaped a like fate. Oral teaching, and practical tuition, were the means of initiating the young into the business of life. We are not about either to justify or to deplore the change which the last century has witnessed in this respect. It has been a change which, if attended with some good, has none the less been attended with some evil. The freedom of occupation,—freedom, that is, for any man to work at any craft which he chooses, whether he enters its precincts by the old-fashioned doorway, or whether he climbs over the wall,—is now regarded as one of the inalienable rights of the workman. There is some reason to doubt whether the craft, the workman, or the public, are the better for the change. One thing may be safely asserted, and that is that the committal of almost any kind of work to the hands of a man who has not been, in one way or another, specially instructed in the primary rudiments of the craft to which it belongs, is a cause of public danger, and of national loss.

Danger and loss, from this cause, will be likely rapidly to increase. It would not be easy to pick out a more instructive example than that of a gasfitting foreman, who did not know that gas and air, when mixed, were explosive. How much light does such a remark throw on many a coal-mine explosion? When these have been so often attributed to rash and self-willed hardihood, may it not often have been the case that the real cause was the utter, profound, total ignorance of the workman? Call him ignorant, indeed, and he on the one hand, and the Committee of Council on Education on the other, stand up and revile you! He can read even the small print of *Lloyd's Weekly Newspaper*. He can work the first four rules of arithmetic. Nay, he may have had lessons in geography or in music; or, in other modes, may have had a primary, transformed into a secondary, education.

But when you ask, How have the bases of his education been laid with reference to his future calling in life? there is an ugly silence. To fit every man for every thing is the great object of many advocates of theoretic education. The result, in nine cases out of ten, we take it to be, that no single pupil is thoroughly trained or fitted for any single occupation. Surely if the education of a man who was to deal in gas was to have any practical value, the first thing that it should teach him would be under what circumstances gas is dangerous to human life. Now it seems to result from the evidence before the Coroner that the gas-pipes and mains of London are entrusted to the practical tendance of a body of men who are utterly unconscious of the dangerous character of the subtle fluid in the distribution of which they are the agents.

We believe that there is hardly one great physical catastrophe that occurs,—from the fall of an iron bridge in a high wind, to the rupture of a gas-main,—which is not more or less directly to be traced to the substitution of the hastily-instructed or the wholly uninstructed workman,—grading from the highest to the lowest,—for

the pupil of adequate experience. That this has been the case in new countries and colonies has long been known. In fact, the very want of traditional training is one of the conditions which have fostered the inventive genius of the United States. But while in a new community such want of training has a certain compensation in the readiness of invention which it encourages, in an old community it is hardly conceivable that anything but mischief can result from it. We are told that a trade must cease to be a mystery. But the danger is that, such being effected, it will soon cease to be a craft. When any great industry can be carried on in a factory, under selected masters and foremen, it will be likely to succeed,—as a means of making money. What becomes of the craft itself, and of those who were once small but independent members of it, is a question less easy to answer.

One thing, we think, ought to call for immediate attention as regards the protection of society from the ignorance of the workmen. In each craft,—speaking more especially now of those which are of public exercise, such as that to which we have been here chiefly referring,—there should be an accepted primer or text-book, with which every man allowed to practise the trade should be made acquainted. This primer should state the rudiments of the craft, more especially with regard to those elements that affect the safety of human life. It should be confined to the craft itself, yet should be so written that a collection of these primers would be at once mutually consistent and exhaustive of the field of technical education, using the word, as we before explained, as synonymous with practical education.

Thus, before a man should be put in a position in which his ignorance might allow him to be the agent of converting a populous thoroughfare into a heap of ruins, he ought to have some information conveyed to him, and drilled into him, as to the reasons for taking care. "You must not smoke on your work." A good rule. But the intelligent workmen will say, "Why? It comforts me to smoke; I do my work better with a pipe in my mouth. Don't be tyrannical." What is the reply to this? Is it a collier or a gasfitter of whom we are speaking? He must be taught what it is with which he has to deal. "You have heard of the terrible fire-jack. You have been accustomed to gaslight from your childhood. You see that that stinking air burns when it is allowed to escape gently into the air; but in that terrible explosion the other day, the fire-damp was simply coal-gas mixed with air. This fire-jack can be produced by neglect wherever there is coal-gas." We are not giving this as a sketch of the primer, but as an instance of the way in which the attention of the lad is to be excited. For those who have to deal with coal, or the products of coal, there should be a special primer, drawn up by a man of thorough acquaintance with the subject, which should give a practical explanation of combustion, distillation, and explosion, and the study of which should be so enforced that no town should be placed at the mercy of a labourer who attempts to discover whether gas,—or, if you like better, gunpowder,—is safe, by the simple test of the application of a lucifer match. That is what is now the practice.

The above had been written before the intelligence of the fatal explosion at the Risca colliery arrived, to add a tenfold emphasis to our words. It is, of course, possible that it may prove that this terrible explosion was due to the one main cause of colliery explosions—the want of a luminous safety-lamp, which shall give more light when it is closed than the open flame would yield. But as far as intelligence has yet reached us, it points rather to what is usually spoken of by juries as "the act of God" than to any human error or neglect. The seam of highly bituminous coal lying at a depth of 840 ft. from the surface was known to be fiery. The ventilation of the mine was ample. The precautions taken were unusual. The men engaged were not solitary miners, but gangs of carpenters, masons, and other workmen, who had gone down expressly for the repairs of the roadway. Every thing points to care. The case, however, of the striking of a spark from a steel tool is one as to which no thought seems to have been taken. It might fully account for the catastrophe.

There is no doubt that the atmosphere has for some time been highly charged with electricity. The hypothesis of anything like spontaneous combustion is one not lightly to be adopted. But it may be asked whether, in the Bilston case, the formation of phosphuretted hydrogen in the sewer is impossible? This gas, as is well known, ignites spontaneously on coming in contact with the atmosphere; and a puff of this fluid, which forms the Jack-o'-lantern or Will-o'-the-wisp of our fens and marshes, would be enough to explode a mixture of hydrogen and oxygen. We suppose that phosphuretted hydrogen is not likely to have been secreted by the black vein. But even as to this an inquiry can do no harm. It will be well to have the chemistry of the spontaneous ignition of coal, which sometimes occurs in the bunkers of a steamer, made thoroughly clear to the practical man, as bearing on this point. The idea has also been suggested that the lightning of the storm which accompanied the Risca explosion may have fired the gas ascending from the upcast shaft. At all events, even without supposing any direct inflammatory action apart from human agency, the atmosphere has for some days been in a highly electric state. We do not know enough of the subject to form an opinion how far the inflammatory or explosive qualities of any mixture of gas may be augmented by a high temperature. But it is quite possible that this may be the case to a notable extent.

As bearing on the possibility of the ignition of the gas within the mine from fire without, whether by the electric spark or any other source, it will be found highly instructive to study the account of the outburst of fire-damp in a colliery at Frameries, in Belgium, on the 17th of April last, which is given in the *Annales des Mines* (7th series, vol. xv., p. 575), and of which an abstract is given in Part II. of the "Abstracts of Papers in Foreign Transactions and Periodicals" of vol. lx. of the "Excerpt Minutes of Proceedings of the Institution of Civil Engineers."

At 7h. 45m. a.m. of the 17th of April, a violent current of air issued from the downcast pit, accompanied with dust, and small fragments of coal. A few seconds afterwards the gas ignited at a surface fire, and immediately the whole interior of the building covering the pit was filled with flame, which extended to a height of over 160 ft. The ventilator having been stopped, ineffectual efforts were made to extinguish the fire. Gradually the flames issuing from the pit lowered, till at 9·45 a.m. it only rose to 6 ft. above the orifice of the shaft. After flickering for a moment, an explosion took place in the shaft. For twenty-five minutes after this, everything was quiet. Then another explosion occurred, followed by four others at intervals of ten minutes apart. It is believed, on the evidence of survivors, that all these explosions took place in the shaft itself, which was 656 yards deep. But an hour after the last of these, a violent explosion took place, extending through the whole mine, and attended with fatal and disastrous results. It was estimated that during little more than two hours preceding the first explosion not less than twelve million cubic feet of gas issued from the workings. So fiery is the coal that fire-damp issues from the face at times with a pressure of sixteen atmospheres, measured in the bore-holes with which it is customary to tap the workings in order to drain the coal of gas. The efflux is at times so full as to extinguish the Mueseler lamps, which are used in the mines. Should a sudden outburst of gas, remarks a French engineer, take place near the down-cast shaft, part of the gas, proportioned to the ventilating current, will course through the mine. The surplus, which may be considerable, may lodge in the downcast pit, and by its levity may ascend so as to retard or even to reverse the current. At the surface, or in passing lights at higher insets into the pit, the gas may become ignited, drawing together more gas and surrounding air. The latter soon attains the proportions for a violent explosion; but the flame at the pit's mouth is unextinguished until the quantity of air attains such a proportion that a final explosion takes place in the pit or in the mine itself.

It is observed in the Belgian mines that the advance borings generally give out but little gas for some days before an outburst. In some cases a cavity, more or less extensive, is found, but the disproportion between any such cavities and the enormous quantities of gas liberated is so great as to lead some engineers to the opinion that the gas exists in a liquid state, which is suddenly changed into a gaseous state by a rise in temperature.

The result of the first inquiry at Risca is that the explosion took place near the bottom of the downcast shaft; but we are told that it seemed to the explorers that the fire did not go towards the shaft, but took the other direction. The hitcher, Thomas Bowden, was not burnt at all, but killed by being blown against the sides of the mine. It is said that naked lights were used by the repairers, as far as 30 yards from the downcast shaft, and that the ventilation in this part was almost strong enough to blow a man off his legs. Further research has rendered the hypothesis of external firing less probable. The lamp of one of the miners was found with a large hole in the wire gauze, evidently caused by a blow from a pick. The lamp was broken and the gauze bent.

A FOREIGNER ON HOME DECORATION.

IN a country like England, that for centuries has been famous for its comfortable homes, it cannot be said that we have ever been indifferent to what we now call, and hear so much about as, "Household Decoration." It may be said that since the first great exhibition in Hyde Park it is easy to trace in a large body of society, which till that time had remained comparatively indifferent to such matters, an eager desire to see their homes and houses artistically furnished and decorated. Volume after volume on "Household Taste" has been published, translated, and re-edited on both sides of the Atlantic, for our American cousins have taken up the question with perhaps even more warmth than ourselves, and the interest still shows no sign of abatement, while the encouraging results obtained justify even further efforts on the part of those who seek to lead the way in this path.

In these columns our readers have had it placed within their power to observe the successive development of the question as argued from the various modern points of view of which it admits. It is not often that we are able to compare with those of our own English professors the views of foreign authorities. On the Continent, where among a very large number of persons the matter of household decoration is one to which consideration was given long before its importance was even suspected in England and where also domestic decoration may be said to be a science, among the greater mass the existence of any artistic views on the matter is unknown or unsuspected; it would be, indeed, difficult to purchase abroad any work similar to those of which so many are to be found in every bookseller's shop or store in England, Australia, or America. Household taste on the Continent partakes more of oral and ocular tradition than of written law, and, out of certain artistic and refined circles, the views on the subject have long been settled with an exactitude that allows of scarcely an exception; indeed, they coincide with such amusing rigidity that the inventory of any respectable Parisian bourgeois household (a representative example of the foreign home) would serve as a perfect type of that of ninety-nine families out of every hundred, commencing from the regulation, cumbersome, but sacredly necessary, "*armoire à glace*," and the inevitable "*bois de lit*," down to the "*reps*" curtains, and the chimney-shelf "*garniture*."

From time to time, however, a voice is feebly raised to break the monotony and indifference of this existence, but the foreigner generally (outside, it is true, a comparatively large class of art-lovers) cares little for his home; his wife is occupied with the household cares, her spare time is devoted to the all-important consideration of her dress or that of her children, and generation after generation the same ideas regarding household decoration are handed down immaculately. The voice raised is drowned in general indifference,—on one side from the people of taste who are opposed to dictation; on the other, of those unmindful of their blissful ignorance;—and hence it is that nowhere more than on the Continent is the observant stranger struck with the extremes to be met with in the houses he may visit.

Notwithstanding the admirable teaching of the French, and the many lessons and suggestions that are to be obtained in Paris on matters relating to household decoration, we are certainly disposed to think that the world, not only of London, but the great world everywhere, has been too long content to allow Paris to lead them in the pure questions of decorative art. The time has now come when not only the

wealthy, who have always been lavish in the decoration of their houses, but the comparatively needy, may find, in London,—in Oxford-street, in Wigmore-street, in Bond-street, and elsewhere; in New York,—in Broadway and in Fourteenth-street, professional household beautifiers with knowledge and means sufficient to satisfy even the correct taste which now in so many instances exists in England and America.

It may not be uninteresting, however, to lay before our readers the views expressed on this subject of household taste by a highly-respected foreign authority,—M. Guichard,—the founder of that excellent institution, the Union Centrale des Beaux-Arts appliqués à l'Industrie, to which reference has more than once been made in these pages. M. Guichard has expressed some of his views on "The Furnishing and Decoration of our Apartments" in a lecture delivered some while since, but only very recently printed. By the aid of the elegant and inexpensive little volume published by Rouveyre, let us examine M. Guichard's views.

The interest connected with the subject of household taste needs scarcely to be drawn attention to; few questions rouse more profitable controversy, few more directly appeal to us, for is it not in the very midst of all that constitutes the decoration of our homes that we pass the greater part of our lives? It is a time-honoured saying, the inaccuracy of which Brillat Savarin was, we believe, the first to point out, that in the matter of taste and colours every one has a right to his own unfettered opinion; in reality such matters are regulated by laws almost as fixed as those which Newton laid down. Their application alone affords scope for the exercise of diversity of taste.

M. Guichard takes us in imagination with him into a modern French house, the features of which he proceeds to criticise; a passing and ironical allusion to the dingy corridor leads us, like that useful feature which replaces, in Paris, our "hall" or "hall-way," to the dining-room, —"the dining-room of the nineteenth century," —or rather to the two dining-rooms, one for daily use, the other for state occasions. In the former the seats and curtains are in woollen rep, the walls covered with flock-paper. Little *étagères* are crowded with various childish knick-knacks. At this point M. Guichard regrets the beautiful decorative plates of the old days, and deplores that the work of our modern potters cannot take their place. The chandelier receives from M. Guichard a rude shock, fortunately only delivered on paper; he begs that the chandelier be made smaller, or at least the height of the room adapted in proportion, a somewhat more difficult task. It is impossible not to agree with our author in his abuse of the rep chair-covers and hangings, and flock-paper, for their peculiar property of absorbing in the dining-room the odour of previous meals. The room set aside for gala days is of the same serious tone; here, again, we meet with sombre, severe hangings; the tables, seats, and walls, the side-boards, are all in black wood, a funereal feature which suggests to M. Guichard a somewhat amusing allusion to an Egyptian custom which, it will be remembered, Mr. Long has treated happily in a well-known picture. The use of black wood for the dining-room is certainly to be questioned,—its proper place is the library or the study; for the dining-room, the furniture by its aspect and very air should be inviting and gay; or, as the author has it, "it never should exceed the tint of old oak, which recalls so successfully the appetising colour of the joint roasted to a turn." Consideration, again, as to the comfort of the guests should not be neglected in the design of the chairs, as is so often the case in modern houses. The "surtout" or epergne, which still reigns in glory in many French houses, only receives from M. Guichard its proper due when he roundly advises its displacement, provising that, if tradition or fashion demand its presence, it should be a subject of great artistic consideration as the principal feature in the composition of the table; above all, our author urges, as we urged for years, that it should never intercept the view or the voices of one's opposite neighbours.

The meal over, the guests retire to the *salon*, "to which penetrates at the same time the odour of the dinner." "Why should there not be," asks the author, "an intermediary room, a species of *lazaretto*, in which could be purified these 'aromas,—perfumes while the appetite exists, miasmas when it is satisfied'?" He has here in mind, of course, the French flat, with dining-room and *salon* on the same floor, rather than the English house.

Introduced with M. Guichard into the *salon*, its gorgeous and invariable white and gold is the subject of the criticisms of the author. In every direction white and gold,—"the eternal absence of beauty dissimulated by wealth." The decorators know the ease of its management; for white, as M. Guichard explains, being the negation of all colour, there is no need to seek contrasts or harmonies of tone. It is sad, adds the author, but less so, nevertheless, than the use of colours which offend the eye.

Appealing to his readers, M. Guichard asks them if their memories will not serve them in recollecting how nearly all the homes of their wealthier friends are decorated in this style. Nature is the sole corrector for this discordance in harmony. Consult Nature; "refer to the great book which she opens for all, and there you will find all your examples. All that is necessary is that they should be seen, analysed, and applied." Taking the instance of the decorative effect of a garden, M. Guichard explains how it will be found that while in the foreground every flower can be distinguished and named, as it recedes from the eye it becomes more and more indistinct. Such is the perspective of colour during the day. At night the effect is exactly the opposite; the foreground is in half-tint and indistinct; further on it grows darker, and beyond the dark, shadow. Here, observes M. Guichard, are two examples furnished by nature. They will be found as valuable guides to follow in the decoration of our rooms. Thus if you wish to decorate your room with light tones, and increase in appearance the size of the apartment, follow the first example above cited. Let your carpet be bright, the brilliant tones toward the centre; let these diminish in intensity, and grow lighter at the extremities, that is, at the feet of the walls. Let your seats, those at least ranged round the room, relieve light on the stuff which covers the seat. Lower the tone a little for the back; then, for the panelling, if it is sunk, paint the projecting portions in tones even lighter than those of the backs of your chairs, and of different colours if you like. Finally, the deepest portions of your panelling will receive the most vaporous tints of your palette. By this means you will produce an optical effect which will apparently increase the size of your room, and you will at the same time obtain a general harmony which will be pleasing to the eye. The advice regarding the use of subdued colours is worthy of attention. "When the exigencies of the room you have to decorate require the use of low or sombre tones, you must take advantage of what I may term 'night perspective,'—that is, you will do the contrary of what has been advised above in the management of 'day perspective.' The carpet must be light in the centre, and the further you leave the centre the more subdued the tones must become. The colour of the seats must be calculated according to the number of distances of which you will have been able to dispose in your panelling. The stuff which covers your seats must be darker than the centre of your carpet, and the stuff at the back must be a tone or two above that again. Finally, the shades must grow more and more subdued on the walls of the room as they approach the farthest distance."

In answer to the surprise that may be expressed at reference to different "distances" in speaking of panelling, M. Guichard explains very clearly his views. In ordinary panelling there are several distances, and by the difference of half an inch several additional distances can be easily obtained, and the management of these, by the skilful aid of the palette, will produce, so M. Guichard assures his readers, quite unexpected results.

As to the stuff of the chairs, the difference of tones between the seat and the back will, as the author hastens to state, certainly appear unsatisfactory, unless the transition between the two is carefully considered. It is not with ordinary stuff bought by the yard that such effects can be got up, but the manufacturers (in France, particularly the Aubusson looms) now produce, and usually to order, any patterns required. "I am far from exacting from the decorator the impossible," continues M. Guichard, "when I require him to produce an illusion which will be completely satisfactory, if he knows how to make use of his palette and of the natural objects which aid him in his interior perspective; if, taking the position of the leader of an orchestra, he boldly makes use of each instrument, lowering the tone of one, augmenting with discretion the tone of another, managing with skill the soloists, he will arrive by delicate transitions at an effective whole."

Colour allied to architecture, as very truly remarks M. Guichard, completes its pleasurable effect on the eye and mind; distributed with taste and discernment, varied with skill, vivified by the clever management of light, colour singularly enhances the architectural features of a design.

M. Guichard at this point takes the opportunity of briefly explaining the theory of colour such as Chevreul has laid it down; and which, whatever doubt there may be on the exact correctness of its explanation, it is impossible not to feel is substantially correct in its application. M. Guichard has made, and is at the present moment making, a profound study, with practical experiments, of the applications and results of the theory of complementary colours such as it was explained in these columns not long since.* The value of a knowledge of the effects produced by the contrast, juxtaposition, and management of colours is warmly advocated by M. Guichard, who is, if we mistake not, shortly to publish a work copiously illustrated, showing the industrial application, for the decorator, of the theory of Chevreul, which, as the author boldly asserts, is a science which, like every other science, can be studied, analysed, and "the profound and complete knowledge of which is of the utmost necessity for all those who are engaged in the decorative arts." They should, further urges the learned founder and director of the Union Centrale, know also the laws of optics and many other matters besides, which our *fa presto* of the present day find it rather long and difficult to learn, and the absence of which leads to so many being actively employed utterly wanting in the necessary education,—not least among these, private individuals who foolishly boast of having themselves directed the choice of their hangings, their furniture, their bronzes, and the whole decorative effect.

From this digression we are recalled to the *salon*, where the uncomfortable nature of the chairs is warmly descanted upon. Why, asks M. Guichard pointedly, is the seat convex when it ought to be concave or at least level? Graceful it may be, but it is ill-suited, as M. Guichard very well puts it, to the construction of the human body. His opinion here, however, is open to discussion by the surgeons. With seats such as we use, the knees are lower than the trunk of the body, he continues, and it is the very opposite that is necessary for repose. The Orientals, who pass the greater part of their lives in contemplation, cross their legs (the knees in this position are higher than the centre of gravity), and in this way they can remain for hours in the same pose, while as M. Guichard very truly points out, with the existing construction of our seats, ten minutes suffice to transform them into a veritable instrument of torture. The form of the chair remains to be studied, and it is certainly difficult not to agree with the author when he foresees from this study the creation of very graceful forms, additionally comfortable as moulded, so to speak, on the human body.

M. Guichard is severe on the fireplace of the present day, the so-called family hearth, which the paterfamilias, in his traditional attitude, is able to entirely shut out. It is a little startling to be advised to demolish the whole structure and replace it by a stove in the centre of the room on the ground that "You will in this manner gain the space occupied by the chimney-piece and the fire-place, which is good for nothing"; admitting, however, the utility of the mantel-shelf (the mantel-shelf, no longer the real mantel-shelf of the past) as the natural place for the customary clock and candelabra, M. Guichard urges that "something yet remains to be done; let the architects endeavour to think of the matter." The fireplace and chimney-piece undoubtedly occupy, flanked as they are by their two cabinets, a large share of room; M. Guichard would propose to substitute a fire-place which, "instead of increasing in height should extend in length and offer a generous warmth to as many of the guests as possible assembled around it." This is to be done by the aid of a fireplace the interior of which could be "regulated by a series of little iron shutters closing and opening at will"; the heating power is to be gas. The writer devotes some para-

* See *Builder*, vol. xxxviii., pp. 392, 421, 464, 583 647, 675.

graphs to the important question of ventilation, or rather its want in our small rooms of the present day,—a grave inconvenience which, on reception nights, leads to an accumulated condensation of vapours on the windows and even the walls, and a common remedy for which is recklessly creating draughts by opening doors and windows. How is it, asks M. Guichard, that we make up our minds to suffer such an evil? The architect may here become a true hygienic doctor at the same time that he can create by taste a series of charming decorative motives. Let him place his panelling (panelling and high dados, let it be remembered, are more universally used in France than in England) at an inch or two from the wall, and a ventilation will be created behind the woodwork which will cure all the ill. The upper (open) portion would be connected from distance to distance with the cornice by garlands or by any other decoration that taste would suggest. The air would thus be continually renewed and never agitated; it would preserve a hygrometric state which would be equable, it would always remain healthy and agreeable. Art and hygiene would in this simple combination both be satisfied.

To the bedroom M. Guichard devotes more than one just criticism. Here, as he truly remarks (and the remark applies almost as forcibly to the English bedroom), are to be found the "largest masses of woollen stuffs, cotton, or silk. Chairs, carpet, *portières*, bed and window curtains, are all of one of these materials. Reject from this place of repose, this warehouse of stuffs, which absorb and keep the miasma of night. No woollen carpet, no heavy curtains to the windows, still less to the bed (it is much more universally the custom in France to have bed-curtains than it is in England); have you not enough in your woollen mattress, your blanket, your eider down, which serve as so many greedy aspirators? Replace your velvet and your silk by flexible matting; let paint decorate your walls; let an intelligent system of ventilation be established, and your bedroom will be what it should be,—healthy and agreeable." To those unable to dispense, from long habit, with bed-curtains, he advises wooden panelling cut, as modern machinery is alone able to do, very thin. Wood under this new form is susceptible of taking the most splendid tones of the palette, which will fully rival the most marvellous silks and velvets, but, unlike them, will not absorb any emanation or infection.

M. Guichard, it will be seen, is not one of those critics whose sole power consists in criticising; he suggests improvements and substitutes, the results of a long and practical career as an architect. This is a quality rarely found, and which cannot be too highly appreciated.

To the æsthetic consideration of the subject he has treated, M. Guichard does not neglect to devote some share of attention. He very properly prays that good taste may become more widely spread,—a result alone to be obtained by forming and purifying the taste already implanted in the masses. M. Guillaume, a former director of the École des Beaux Arts, remarked not long since on this very subject that it was by "the level of ideas, and not by the efforts of amateurs, that should be established the kind of superiority which suits the more cultured classes of society. Public opinion would be more authoritative if the men of the world, enlightened by study, and placed above all considerations of interest, could direct it; while at present we see them submitting to the caprices of fashion, or even inspiring them, and, indeed, in their knowledge both of the theory and practice of art, liable to the far inferior to an intelligent artisan." Much remains unquestionably to be done in this direction in our system of education, the closer union of art and letters in the educational system forming a first step in this direction. "We would wish," continued M. Guillaume, "that this union should commence from the earliest classes, and that art, after having been presented as one of the most living expressions of religious sentiment, as one of the sources of history, and the indispensable auxiliary of literary intelligence, should be connected in its critical bearing with the principles which regulate every well-reflected production; and with regard to its origin, with the constitutive ideas of the human mind." It is impossible not to feel that when this warmly-expressed desire of the director of the École des Beaux Arts is carried out, a great stride will have been made in the spread of a cultivated taste among those who at present are so contentedly ignorant of its advantages and the pleasures it bestows. But a further aid must come from the artists and the manufacturers themselves. This point M. Guichard insists upon, and in support of its importance quotes a valuable passage from a report of the commission of the Union Centrale; the quotation is worthy of being re-quoted: "The period of uncontrolled competition under which industry at present is carried on, does not raise the workman to a proper understanding of the work he creates, but subdivides it, to lower it to the capacity of those who accomplish it. There exist in the present day few, if any, strong or able enough to take the raw material and fashion it, model it, chisel it, enamel it, gild it, give it, in fact, a form and a colour which are the production of reflection and the expression of the human heart. On the other hand, art itself, floating uncertain amidst brilliant individualities without schools, seeks its inspiration from all epochs and at the centre of all the extinct arts; from creator, from inventor that it once was, it has become learned, and taking too often memory for talent, it pretends to serve our needs, our tastes, our modern aspirations, with ready-made solutions and second-hand forms."

Let the details be carefully studied, but let the general effect be not forgotten. The great centuries of the history of art are far from us. Times and manners have changed, and with them our fortunes. Let the artists and creators study their condition in the present day to satisfy their needs. Let our art be made to suit these needs: in this action it will lose no dignity. In the enormous change it has seen since its rise, its progress through the East, through Greece, in Italy, and in the West during the last 500 years,—can art be said to have abdicated in all these transformations either its unity or its beauty? Whether it has triumphed through its simplicity or its grandeur, through its force or its majesty, or through its grace, we ever find its glorious trace at a supreme degree above the lowest water-mark of the civilisations of the past.

ANOTHER WORD ON THE SMOKE QUESTION.

CERTAIN people who have the welfare of society very much at heart, and who have already notably contributed to it in various ways, are proposing, we believe, to enter on a systematic effort to promote a further campaign, ultimately in a legal form, against the production of smoke in London; to apply, in fact, to habitations in general some such compulsory legislation as is already in force in regard to the processes of combustion in manufactories. From what we hear of it, the matter seems as yet to be in too early a stage to be referred to except in these general terms; but as it seems likely that public attention may be again specially directed to the subject, it may be useful to recall to those who are interested in it some of the main facts and principles to be borne in mind in attempting any systematic treatment of the smoke-plague.

Probably a good deal of indignation on the subject has been evoked by the peculiar violence of the fogs of the past winter. We say indignation, for that appears to be the kind of feeling which a thorough visitation of London fog evokes from those who have to endure it,—a feeling that they are utterly ill-used persons, and that somebody ought to be hanged. This is to some extent, we believe, a rather recently-evolved feeling. Formerly the London fog was mostly regarded as a visitation of Providence, to be accepted with the same resignation with which a heavy thunderstorm would be received: it was nobody's fault, although very inconvenient, and even in some respects dangerous; and many clergymen would probably have thought it not out of place to have added a prayer against fogs to the other meteorological petitions in the Prayer-book. The reason for the change of feeling, the modern lack of pious resignation to the fog, is not to be traced entirely to the progress of that kind of materialism which led a parish clerk to reply to his rector, when the latter proposed to read the prayer for fair weather,—"Bless you! sir, its no use till this wind changes." A good many people have seized hold of the idea that the London fog is preventible, and that it consists of the London smoke blown back or kept in suspension, under certain atmospheric, and perhaps electrical, conditions, over the doomed city. The fact that other cities were not visited with such fogs led to the conclusion, logical enough, that there must be a cause for them special to London,—

> "For this effect, defective, comes by cause,"

and the smoke seemed the only scapegoat. In respect of this idea there are two discriminations to be made. In the case of some of the thickest fogs we have had it has been observed that the "inspissation" (as Dr. Johnson would have called it) is as great far out into the surrounding country as it is over the town, and that on all sides, independent of the quarter of the wind. We had occasion ourselves to notice this in regard to one of the very worst fogs of this last winter, which was thicker some miles out of London than in it, though it changed its colour, being yellow in the town and white in the country. The colour in town gave every reason for the belief that smoke formed a considerable factor in it; the colour in the country showed plainly enough that it could be just as thick without the smoke to help. As to what may be the real main cause of the London fog we do not here say again, as our business at present is with the smoke; we only wish to point out that those who think they will get rid of the London fog by getting rid (if that be possible) of all the smoke will probably find themselves disappointed. They will get rid of its colour and of its peculiarly dismal and depressing effect, but that is all. Other facts combine to indicate the same conclusion. Manchester, in the matter of "blacks" in the air, is a great deal worse than London, as London visitors at the last Social Science Congress must have observed. When eleven years ago there was a discussion at Newcastle-on-Tyne as to the repression of smoke there, London was cited as an example of what could be done, and it was said that with proper attention Newcastle might be made as free from smoke as London. This perhaps implied an innocent illusion on the part of the Newcastle folk; but what may at any rate be deduced is that both Manchester and Newcastle are (unless the desired improvements in the latter town have been effected) more smoky than London, but they have not the same fogs.

It is even a question whether, granting the presence of a great quantity of smoke in the air of London and in the fogs of London, that is in itself deleterious, whether even a fog is not less injurious to some when mixed with particles of carbon than when pure, if one may apply that adjective to a fog. We have heard decided opinions from medical men to the effect that what is popularly called "soot" is, to a certain extent, when diffused in the air, rather conducive to the health of a town than otherwise; that it is a great disinfectant; that if it were possible to fill the air with it for half an hour and then disperse it, many deleterious influences would be absorbed and removed with it. That is, as to the visible part of smoke. As far as the question of health is concerned it is not the visible soot, say some, but the invisible gases, which are injurious in rendering the air unhealthy to breathe. That a smoke-laden atmosphere is hurtful to delicate lungs, however, we believe there can be no doubt.

This brings us to one of the considerations much lost sight of in connexion with what is erroneously called "consuming" smoke. A fire in which the fresh fuel is introduced from below, in what are called by the trade smoke-consuming grates, unquestionably makes less smoke, after the first lighting, than one in which the fresh coal is added at the top, but it does so because the carbon-vapour forms new combinations in passing through the already heated coal at the top; it takes away everything into the air which would otherwise escape, in a form less visible, but which robs the fire of a greater portion of its heat, or its heat-producing faculty. It renders the smoke less palpable, but is as far as ever from promoting the real object to be aimed at, the prevention of the formation of smoke.

For it cannot be too often repeated to the general public, that the only object that can be rationally aimed at, and which can be accomplished, is the prevention of the formation of smoke. The "consuming" of smoke, once given out, is not possible, although almost all people, except experts in the subject, still use the phrase, and apparently believe in the operation. Smoke cannot be consumed; but, on the other hand, smoke is by no means a necessary product of combustion; it is only a product of imperfect combustion. Perfect combustion requires a large supply of oxygen, larger than is supplied

by the mass of air ordinarily in contact with the fire. With an artificially increased draught conveying sufficient oxygen to the burning coal, the carbon all unites with the oxygen, passing off as carbonic acid gas. Failing the requisite supply of oxygen, part of the carbon goes off as carburetted hydrogen, *Anglicè*, smoke. The question is as to the best practical means of feeding the flame with sufficient oxygen.

All the smoke-preventing furnaces which have fulfilled their purpose successfully combine to show that the effective means of doing this consists in supplying pure air to the flame at its point of production in such a manner as to mix it as thoroughly as possible with the flame at all points. There is one other way of preventing smoke which has not been put to the same practical test, but which has reason in it; that is, the principle suggested in an article in these pages in the early part of last year, under the heading "A Smokeless London," and which consists in treating the fuel beforehand so as to remove some of the gas from it, and leave only sufficient to combine with the oxygen supplied by the air under ordinary circumstances.

There are only these two ways of doing it that are founded on scientific reason or are likely to be successful. Either remove some of the gas so as to render the fuel incapable of producing smoke under fair treatment, and with the average supply of air, or give it an extra supply of air where air is wanted. This latter plan has been adopted with perfect success in large furnaces; without any pretext of consuming smoke, without any elaborate apparatus, smoke has been entirely prevented by introducing air so as to have every opportunity of mixing with every part of the flame at its points of production. The same principle can, of course, be applied to a house-grate, but it has not been so applied as yet. A new form of grate would be required, introducing pure air in separate jets rather than in a mass into the midst of the incandescence, and we have not seen a grate as yet which supplies this desideratum. The other principle of partially extracting the gas from the coal, not reducing it absolutely to coke, but leaving it with only so much gas as will readily combine thoroughly with the ordinary supply of oxygen from the air, we believe would be found to answer; and if it became a question of applying compulsory legislation, it would, of course, be infinitely easier to bring the law to bear upon a limited number of dealers in fuel than on the whole population who burn it in their houses. Added to which, this system would, as pointed out in the article before referred to, in which it was first advocated in these columns, be capable of great economical advantages on a large scale.

THE WATER SUPPLY INQUIRY.

THE period of the Session, and the information elicited from the first witness examined by the Select Committee on the Water Supply of the Metropolis, render it expedient to inquire what course can be now most usefully taken to further the wisest settlement of this important question. Nothing is more worthy of remark, in all that relates to the position of the water companies and to the present and future water-service of London, than the fulness and multiplicity of detail accessible on certain features of the case, at the same time that an almost total ignorance prevails as to other and no less important elements. The truth is that, as far as returns have been prescribed by Parliament, the information accessible is almost exhaustive. On the other hand, as far as those scientific data which will hereafter prove to be controlling conditions of the case are concerned, they have as yet almost wholly to be collected, or, at the least, to be co-ordinated. Of statistical information there is a plethora. Of amateur or speculative recommendations there are more than enough. But a general view of the whole case, to the outcome of which all these details are subservient, has yet to be taken.

It cannot be denied that the acceptance of the terms which, as we may ascertain from the evidence of Mr. E. J. Smith, were provisionally agreed upon between that gentleman, acting for the late Government, and the water companies, was urged under the influence of a sort of panic. The clauses of the Bill were referred to like the leaves of the Sybilline books. "You may take them or leave them," was the argument, "but if you refuse them to-day, you will not have the chance of accepting them to-morrow." And this view, which was urged with great plainness of speech, and with somewhat of the triumph of a man who thinks that he has just done something unusually clever, in the columns of the *Times*, has been put into a concrete form in the course of the evidence. The income of the water companies, the committee was informed, was increasing at the rate of 100*l*. per day. That, the same witness alleged, was equal to an increase in capital value at the rate of 3,000*l*. per day. Certainly, if a property which *must* be purchased is steadily increasing in earning value at the rate of more than a million per annum, despatch in concluding the bargain would be a wise economy.

Men of business, however, are pretty well aware of the danger of leaping at a bait on the pretext of "now or never." That being the case, it was wonderful how the panic spread. Grave bodies, like the Commissioners of Sewers, came hot-foot to the Government to implore the immediate introduction of measures to prevent the companies from exerting their statutory powers. "We held that competition was out of the question," said Mr. Smith. With this helpless view taken by the Government arbitrator on the one hand, and with the vague fears of the extortionate action of the companies on the other, there would probably,—but for certain interfering circumstances,—have been a rapid legalisation of the agreements.

That a Select Committee should look into the matter, before such a leap in the dark was taken, was a proposal of practical good sense. That the Committee should go further, and inquire into the sources of future supply, into the purity, or otherwise, of the water, and into all the vast mass of details which constitute the physical part of the case, is another matter. Not that such an inquiry should not be made. Quite the contrary. But it is one that cannot be made in a hurry, and one which will require a more prolonged, and probably a more systematic, investigation than is competent to a Committee of the House of Commons.

To the first part of the question,—the inquiry whether the provisional agreements made by Mr. Smith ought to be sanctioned by Parliament,—the first ten days of the sitting of the Committee have been enough to furnish the reply. It is obvious to all those who can read between the lines of a report that even the first day's evidence was conclusive. The great weapon of the purchaser, freedom of market, was not only not employed by Mr. Smith, but was admittedly laid aside. "Competition was out of the question!" That being so, the whole transaction degenerated into a haggle. Even as to that haggle, however, one effective argument on the part of the purchaser appears to have been entirely overlooked.

It is obvious to any person accustomed to ascertain the value of property, that the property of the London water companies possesses a rising value. If we glance over the Board of Trade returns for the past five years, we see that there has been a steady increase in gross receipts at the rate of 4¼ per cent. per annum. But the increase in net receipts, which is the true test of value, has been more rapid. The working expenditure has not increased as fast as the gross income. Against 4¼ per cent. in the latter there has been only an increase of 3½ per cent. in the former. These rates of increase, which some time since we calculated from the returns of the companies, are considerably less than those which have accrued since the whole period from 1872, as shown in the Dilke return. The increase of income has been 5·04 per cent. per annum for eight years, but only 4¼ for the last five of them. But the increase of capital has been nearly in the same proportion for the whole time. This yearly increment of value is, therefore, something fairly to be expected to occur in the future. And this has been the main fact that underlies all questions as to future "increments" and deferred payments.

This is all very well, as far as it goes. But there is something more. Two facts have been left out of sight. One may be regarded as only matter of account. The other is cardinal, and commands the whole question.

The income of the water companies owes its expectation of increase to the increase in the size and population of London. That increase may be taken at 2½ per cent. per annum; the metropolis doubling its size in forty years. Looking back to the past five years, the average increase in the capital of the water companies has gone on step by step with the increase of the metropolis. The annual increase has been 2½ per cent. For the past eight years it has been 2·6 per cent. Thus to earn the net increase above indicated, a corresponding increase of capital outlay must be made. This has not been brought into the account; and the whole calculation of future profits is thus entirely in the air.

So much for finance. But that is not all. The capital of a company is not a matter that can grow of itself. It is an artificial provision, which has to be sanctioned by Parliament. In the accounts of each of the companies is to be found the account of the unexhausted powers which they each possess as to the raising of capital. All together do not amount to 1,200,000*l*., or to 10 per cent. on the present expended capital. In four years, therefore,—taking the case all round,—the growth of the companies will have stopped. Their "increment" will be hide-bound. Only Parliament can enable them to go on,—to supply the wants of the future, to earn more than four years' increase out of the twelve years' increase for which Mr. Smith proposed to pay them, according to the First Schedule of the Metropolis Waterworks Purchase Bill, the sum of 9,280,000*l*. Taking this valuation without comment, the companies, if let alone, could not earn more than one-third of this sum without fresh Parliamentary powers. We have not room to add more to this very important consideration than the fact that items provided for in clauses 9, 13, 20, and part ii. of the First Schedule of the Bill, amount altogether to 4,408,000*l*., which the public would have to pay, and which has not yet been brought honestly forward on the face of the account, the total of which thus stands at the round figure of 35,750,000*l*.

Mr. Richardson, the chairman of the Parliamentary Committee of the Metropolitan Board of Works, is the first witness who has taken the bull by the horns, and stated in round numbers what would be the cost to the ratepayers of the bargain struck by Mr. Smith. The Metropolitan Board, said Mr. Richardson, are in favour of the acquisition of the water companies; but they consider the terms excessive. Taking the purchase as effected in a stock which he rates at 114, Mr. Richardson brings the amount up to 35,920,000*l*., and 3,250,000*l*. for debentures. There is in this, however, no abatement for deferred payment. The total cost arrived at by Mr. Richardson is 40,500,000*l*. Our own estimate (*Builder*, March 13, 1880, p. 302) was "upwards of 38,000,000*l*." The difference between us is due to the fact that we only allowed an extra value of 5 per cent. for 3½ per cent. stock as compared to 3 per cent. at 90, and Mr. Richardson takes the price of 114 for the 3½ stock. Again we spoke of present price, and Mr. Richardson speaks of permanent cost. We are thus in very close accordance, and we, certainly, cannot object to the substitution of Mr. Richardson's figures for our own.

No serious evidence has been elicited by the committee which is anything but condemnatory of that extravagance of the agreements which we were long the only persons to point out. Mr. Stoneham, one of the Assistant Secretaries of the Board of Trade, and an auditor of water companies' accounts under the Act of 1871, reluctantly described the effect of Mr. Smith's agreements as converting every 20*s*. of present income into 30*s*. of future income. Sir Henry Thring, cited by Mr. Smith as an authority on whom he had relied as to certain allowances for back dividends, wrote to the chairman of the committee to say that he had given no opinion on the subject at all. The evidence of Colonel Bolton, the Water Examiner under the Act of 1871, was even more damaging. He had, he said, "over and over again urged on Mr. Smith that the services of an independent professional engineer should be secured, as the general information he could furnish was not of a nature to enable an engineer to arrive at even an approximate value of the works." This is the comment on Mr. Smith's statement, "I had the story of the improvements going on, and the exact amount of those executed up to the time I was considering the matter, and I had the best evidence as to the expectations of the future from Colonel Bolton and others."

It is melancholy work to contrast the statements of Mr. Smith with the facts. We referred in a former article to the excess of the totals in the returns made by that gentleman over those of the companies as to the income of 1879. Schedule C of that gentleman's report of the 26th March is to us simply unintelligible. But he begins with "increment of income in

1880-81, increasing 780*l.* annually." In 1879 there is, according to the companies' statement, an increment of 35,500*l.* of the *gross* income over that of 1878. But there was an increase in the items of maintenance and management of more than 10,000*l.* at the same time, and there was an increase of more than 2,000*l.* on interest paid. Thus the net improvement of the year 1879 over 1878 is little over 23,000*l.* And on that naked fact is based the payment to the companies of 9,240,000*l.* of deferred stock. In fact, the mean increment of net profit from 1878 to 1879 is less than the mean increment from 1871 to 1879. The importance of this fact it is hardly necessary to point out.

In a word, taking 33 years' purchase to represent a perpetuity,—which we take to be fair at the present value of money,—the equivalent of a perpetual enjoyment of the present income of the Water Companies is 28,314,000*l.* As to future increment, first, we have to remember that, within a few years, none such can be acquired without further Parliamentary powers being obtained; and, secondly, the sum of such increments for five years, taking that of the last year as normal, is only 345,000*l.* The sum of 30,000,000*l.*, which is equal to 242*l.* for every 100*l.* of the companies' capital (including the loan capital), would therefore, in our opinion, be a very ample consideration for the transfer of the property, if such transfer be based on a mere appreciation of the present and expected income, under existing statutory powers, and without raising the question of the condition and sufficiency of the works.

Once again,—for the figures are large, and the misuse of them is incredible,—taking last year as normal, the increase of capital, according to the Dilke return, was 315,314*l.* The increase of net profit, after paying additional interest on loans, we have seen, was 23,000*l.* Taking this at thirty-three years' purchase, gives a figure of 759,000*l.*, from which the deduction of the actual capital raised and paid, as above stated, gives us an increase of value of 444,000*l.* in a year. This, no doubt, is not a figure with which to trifle. But it is something widely different from the panic estimates of Mr. Smith.

On the tenth meeting of the committee, on the 16th current, Mr. Philbrick, Q.C., who represented the Metropolitan Board of Works, said that he had abstained from calling evidence on the subject of an independent supply of water in deference to what he understood to be the view of the committee. The Chairman said he had given no instructions to exclude any evidence. Sir Edmund Beckett then addressed the committee on behalf of the water companies, and contended (if correctly reported) that Mr. Smith had given a figure by far too little. He denied that there had ever been an arbitrary increase of water rates in any district of London, and declared that the companies had not been aware of the full value of their property until the committee had made them so aware. "He doubted if there were a hundred people in London who understood these bargains,"—a doubt in which, if the argument of the learned counsel is at all fairly reported by the daily papers, he evidently included those whom he addressed. He declined to call witnesses, as he said that he did not see that he had anything to answer. As far as rehabilitating Mr. Smith's proposals went, he certainly did not attempt to answer any of the numerous objections of which we have referred to a few of the most conclusive.

PROMOTION OF SANITARY KNOWLEDGE.

THE PARKES MUSEUM OF HYGIENE.

A PUBLIC MEETING, to make known the purposes of this Museum, will be held in the Egyptian Hall of the Mansion House, on Tuesday next, July 27th. The chair will be taken at three o'clock by the Right Hon. the Lord Mayor, and amongst those who are expected to take part in the proceedings may be named the Earl Fortescue, the Earl of Dunraven, K.P., Lord Aberdare, the Hon. Evelyn Ashley, M.P. (Secretary of the Board of Trade), Mr. Torrens, M.P.; the President of the Royal Society, the President of the Royal College of Surgeons, and many others. All interested in promoting a practical knowledge of sanitary science are invited to attend. Tickets will be forwarded on application to Professor Berkeley Hill, 55, Wimpole-street; and, we hope, many will be asked for.

DEPARTURE FROM THE TERMS OF BUILDING CONTRACTS.

IT is a common saying that a person is "a man of business" when the speaker wishes to impress on the person whom he is addressing that the subject of the conversation is a man of remarkable accuracy. If any student or professor makes mistakes in his monetary transactions, the excuse is at once given that he is not "a man of business." It may be doubted, however, whether this is not a very fallacious expression, for any one of accurate habits of mind, who observes how blunders and inaccuracies daily occur by the hundred in commercial circles, cannot fail to wonder that they should happen if the man of business is the exact person he is generally supposed to be; and if we class builders and architects as mere men of business, it is often a matter of astonishment to see how frequently mistakes and oversights occur of so palpable a nature, and often so injurious in their consequences, that it is much to be regretted that more of the typical rather than the actual man of business is not to be found in connexion with these transactions. It may be useful to work out these general assertions somewhat more fully. In the first place, there are constantly being drawn up throughout England every day contracts so limited in their extent, and so dubious in their form, that they open a door to numerous disputes, which sometimes actually occur, and sometimes are avoided, not by any good management, but by the fact that the point upon which the parties might split does not actually arise, or because the parties happen to be blessed with more good temper or forbearance than is often found. And very often these contracts are drawn up meagrely, because a man thinks to himself that such and such event will not happen, and if it does, that he can trust to the person with whom he is contracting to oblige or to meet him in the matter. And we feel sure that it is under this same impression that terms in contracts are not acted up to. Probably most of the readers of the *Builder* are familiar, in some way or other, with that very common term in a contract, that no extras shall be begun, or no additional work or decorations allowed for, without the same are ordered in writing by the employer or by his architect. But there is, probably, no proviso in an agreement which is more constantly or more patently broken than this is. The contracts with this term are signed by builders every day with full knowledge of their contents, and yet they go on doing extra work without written orders, feeling sure that they will be paid for what they spend time and labour upon. And no doubt employers do not always enforce this term, but, on the other hand, any man with any kind of experience in regard to building disputes must be aware of numerous instances in which employers have availed themselves of the absence of written orders to avoid payment for work undertaken without the agreed formalities; and therefore, in regard both to contracts generally and to this particular term, we say that no accurate builder or contractor who wishes not to be harassed by disputes should ever omit to insert clauses in his contracts dealing with all usual possibilities; nor when they have been inserted should he omit to see that they are carried out exactly and to the letter; for, as we have pointed out, human nature cannot be relied on to deviate always from strict legal rights. It is all very well for judges to style defences which rely upon the proviso as to written orders, as was done in the case of Myers *v.* Sarl (30 L.J., Q.B., 9; Roscoe's Digest of Building Cases, p. 34), as "shabby," when, unfortunately for the contractor, the Bench have to add that the point against him is too clear for argument. And we are by no means sure that, if a builder executes work without written orders, he is entitled to much commiseration if afterwards he is unable to recover; for those who enter into contracts should abide by them.

Then, to take another instance, architects often do not attend to the clauses as to certificates with sufficient strictness. Thus in the reported case, decided a long time ago, of Morgan *v.* Birnie (9 Bingham, 672; Digest of Builder Cases, p. 20), the architect sent a letter merely enclosing the builder's account checked by him, and this was held not to be a certificate. In many instances, of course, a not very strict compliance with the contract does no harm, because the parties may be solvent, well-intentioned, and not disinclined to pay; but, on the other hand, if troubles spring up, the absence of a thoroughly formal certificate may be the cause of annoyance, not to say trouble and loss of money. Instances of such trouble, from a want of these accurate certificates, must quickly occur to the mind of any one who has had to do with building contracts, especially if he has had some experience of those about which disputes have arisen. Then, again, there is yet another point in regard to which a good deal of looseness prevails, and which too often entails very disagreeable disputes, and this is the absence or the presence of the proviso as to time. When no proviso of this kind is to be found in a contract, it needs no demonstration as to how it is likely to work in an injurious manner; but when it does occur, it may cause difficulties in two ways. A contractor may, urged on by competition, most shortsightedly give himself an unreasonably short time to complete the work. Then he lays himself open, by not completing by the appointed time, to the payment of penalties. If the employer is good-natured, when the contractor explains that he cannot finish in time, he gets the period extended, no harm is done, and he will very likely tell his neighbour, as a sort of general proposition, that "you can always get the time extended," whereas such extension is by no means always the case; or extra works may take place, and then the contractor may forget to stipulate for extra time. So troubles may arise. But all these difficulties spring from the one source of not making full and accurate contracts, and not sticking close to provisoes contained in them. Builders and those who have to do with buildings should always bear this fact in mind.

FROM THE BANKS OF THE SEINE.

NEVER can those living on the banks of the Seine, from Charenton to the Point du Jour, expect to witness such a scene of splendour as that which Paris presented on the *fête* of the 14th of this month, and never can the architectural features which crowd with such historical interest and familiar beauty the old city be more distinctly marked out by the skill of the emphasising artists than they were on that evening. It was, indeed, a novel sight to see the familiar old towers of Notre Dame, with a strangely fresh beauty added by the arrangement of their flags and lights, and not even Viollet-le-Duc could have quarrelled with the graceful lines that art and accident effected on the old towers of the cathedral or the graceful spire of the Sainte Chapelle. Even the too-captious disposition of the proverbially irritable artistic mind would find it difficult to complain of a deficiency of thought or the absence of suggestive sentiment in the *fête*. The complaint that we have heard that there was somewhat of the theatrical in the character of the adornments,—although it is supposed that that accusation is especially applicable to the French, is not happy at the present moment; for if they were successful just now in all their theatrical attempts, they might, as in their decoration of Paris on the 14th, be indeed fairly credited with having accomplished the highest possible achievement in the way of a theatrical display. To those who remember any of the great illuminations in London, or the illumination of Florence on the occasion of the independence of Italy, or any of the *girandole* during the most popular period of Pio Nono's pontificate, or the magnificent displays during the late Emperor's career, must admit that the display of Wednesday in last week, notwithstanding its entirely popular character, was not by any means deficient in that element of sentiment without which all true art must be far from successful, and such a sight as the gardens of the Luxembourg displayed on the termination of the fireworks at the Observatory (just as the short and rapid thunderstorm burst over Paris) must admit that the sentiment of the show was sufficient to satisfy the most enthusiastic romancer. Strangely enough, and little to be expected, the illumination of the Tuileries was wanting in the sentiment that lingered and manifested itself so strongly at the Luxembourg, and we can imagine that an enthusiastic American might, at the Tuileries and the Champs Élysées, even with the Arc de l'Étoile at the end, have dreamt of the possibility of rivalling such a display; but his courage and his natural good sense, and his gradually increasing knowledge of the enormous interest of the old world, would make him despair of ever getting up an illumination similar to that of the Palace of the Luxembourg. In the thick air the outline of Marie de Medici's home, the

fountain and the pond lighted up by fitful lights, the singular mixture of the sixteenth and seventeenth century art, and the latest development of the epoch in the electric-lighted dome of the Pantheon, in the gardens themselves the quaint and gnarled forms of the orange and pomegranite trees, the glow-worm lanterns in the shrubbery shining out amidst the sombre darkness, all produced a fairy-like effect suggestive of the period of the utmost romance.

At the École des Beaux-Arts the competitors for the Prix de Rome have exhibited, this week, the pictures on which they have been occupied during the last seventy-two days in their solitary *loges* at the École. Again the pictures are monotonous in their academic and minutely realistic character. Academic, from the choice of subject,—the meeting of Ulysses and Telemachus,—realistic, and in parts exceedingly meritorious, from their resemblance to the familiar models who have sat for the heroic characters. In all such competitions one is disposed to wonder how the judges are able to detect the peculiar excellence that secures to the successful the prize so dearly sought for; and it appears to us this year that there is more than ever a singular equality in the ten pictures submitted. The Prix de Rome offers, in the first instance, a reward so fascinating to the young artist, that it appears almost to create in his mind an innocent belief that the highest point that a French artist can arrive at is thereby obtained, and a belief like this in a Frenchman's mind is equivalent to the possession of the highest honour that the world can afford: having arrived at a position so enviable, he appears henceforth to rest on his honours; at least, so urge some, and when one thinks of the delightful position that a Prix de Rome laureate secures by success in the trial, one scarcely wonders that men so young should in many instances be spoiled.

That all is not rose in the lives of the artists here any more than in England is a fact which finds cruel proof from time to time, though the appeal of charity comes to relieve the distress. Very recently a number of ladies, well known in the Parisian artistic world, have founded an orphanage for the unhappy young girls (natural and legitimate) left unprovided for by their parents,—literary men, painters, musicians, sculptors, and dramatic artists. Voluntary subscriptions are to support the society, the statutes of which are already drawn up. A large house with a garden and workshops has been rented, and the orphanage is already in working order. Its usefulness no one can deny; the more so as, till this moment, no regular institution existed in Paris for the orphans of artists.

Infancy and old age, the extreme points of life, have from all time been the care of the philanthropic and the provident. Infancy abandoned offers a danger to society; old age neglected is unworthy a civilised community. This latter consideration has led to the formation of an association bearing the title *Arti et Amicitiæ*, the object of which much resembles that of a society proposed not long since in London, to rent a beautiful villa as a place of retirement for all those who, devoted during their lives to the study of the liberal arts, have been unable to arrive at fortune,—a number, alas! very large. The names of Meissonier, Gerôme; Charles Garnier, the architect; Henri Lehmann (the brother of Rudolf Lehmann and the new member for Evesham); Charles Blanc, Victor Hugo, Littré, Alexandre Dumas, de Quatrefage, and many others known in France, speak sufficiently for the unanimity with which the idea has been welcomed. In its arrangement, the society *Arti et Amicitiæ* resembles, it will be seen, Lord Lytton's great failure, the Guild of Literature and Art, of which we once heard so much.

In the death of M. Isaac Pereire, which took place a few days since, the cause of philanthropy, if so it may be called, has sustained a heavy loss. If M. Pereire's name is not quite so universally known in England or America as that of his co-religionists, the Rothschilds, in whose house, when young, Pereire was, we believe, a clerk, his acts of enlightened generosity have none the less won for him the esteem of the observant, and among journalists his memory is peculiarly cherished. Pereire's life has been an interesting one, passed at an interesting period of the history of modern France which he has taken no small share in forming. Among the many financial schemes with which his name is connected, Isaac Pereire founded the first French Transatlantic service which competed with our own steamship lines to America, while his brother Emile was the manager of the first railroad in France, that from Paris to Saint Germain, and though blind during the last ten years of his industrious and literary life, Isaac Pereire, like our own Postmaster-General, Mr. Fawcett, had kept his mind ever alive to the passing interests of the day. As one, cited among many, of his acts of philanthropy, only a short time since he set aside a sum of 4,000*l.* to be awarded, as, we believe, we announced in these pages, in prizes to the essayists who should most sensibly propose a series of reforms by which pauperism could be reduced and thrift and more general ease secured among the masses. In the frivolous world there is more than one foolish story told of the rivalry that used to exist between old James Rothschild and Pereire. One of these, which rests on the authority of Captain Gronow, of Anglo-Parisian reputation, attributes to James Rothschild (whose want of urbanity, by the way, will always be remembered in striking contrast to the affability of his descendants), a characteristic expression of wonder, in hearing of Pereire's financial success, that any one could transact business with "such a Jew." But M. Pereire has known how to make his name respected, and long will his superb mansion in the Faubourg Saint-Honoré, near the British Embassy, recall to passers-by the industrious activity, the large fortune, and the broad-minded generosity with which it was expended by old Isaac Pereire.

From England the writers, who have been quite numerous this season on the banks of the Thames, condescend, "when they have leisure," to write to their Parisian readers, and very comic reading it offers to those familiar with London. It is certainly calculated, even in weather as severe as the present, to rouse a warm glow of pride at the patronising praise of a correspondent in his criticisms on "Erving," or the doings of "M. Bencroff;" "Tooles" ("Ici on parle Français" doubtless) would be flattered to hear himself compared to Got, but it is under the epithet of "Benedictus" that is hidden the deepest mystery, alone thrown light upon by the casual mention of a recent benefit concert, the pecuniary success of which arouses the surprise of the French critic. The worthy professor seems sadly to have puzzled "the intelligent foreigner." This season, as in another journal, we meet with further mention of "Sir Julien Bénédit." Dealing thus with names as familiar as these printed in every newspaper and on every placard and hoarding in the city, one trembles at the prospect of such a gentleman perhaps at present attempting what many a Frenchman has not hesitated to carry out, a complete review of England, its society, its manners, its political, scientific, literary, and artistic institutions.

The sad announcement of Mr. Tom Taylor's death has been noticed by the Parisian press with exceedingly good taste, and a knowledge of his usefulness and his loss which is not often shown by French writers. No ill-natured allusions are made to the accusations of his plagiarism, and due credit is given to his merit as one of those rare English critics on art, dramatic and pictorial, who are more than commonly acquainted with the subjects of their critiques.

EDINBURGH.

As our readers are aware, the late Sir John Watson Gordon, P.R.S.A., bequeathed a sum wherewith to found a Chair of Fine Art in the University of Edinburgh. The fund having now become available, candidates were invited to offer themselves for the professorship, of which invitation, eight gentlemen availed themselves, viz., Mr. Gerard Baldwin Brown, M.A.; Mr. P. G. Hamerton, Mr. F. E. Hulme, Mr. W. Roscoe Osler, Mr. J. P. Richter, Ph. D.; Mr. John Forbes Robertson, Mr. J. F. Rowbotham, and Mr. W. Cave Thomas. The choice of those with whom the appointment rested has fallen upon the first-mentioned gentleman, Mr. Gerard Baldwin Brown. The professor-elect is the son of a Congregational clergyman in London, and was educated at Oxford University, where he graduated as Master of Arts in 1874. He was successful in a competition for a Fellowship in Brasenose College, and carried off the Chancellor's Prize for an English essay, the subject chosen being "The short Period during which Art has remained in its Zenith in various Countries." The predilection thus shown for this line of study was followed out in a course of practical training for the profession of an artist, which, combined with a knowledge of the history and theory of art and a good literary style, entitles the Professor to consideration as an art-critic; an example of his power in which direction will be found in an article in the current number of the *Nineteenth Century* on "Modern French Art." Mr. Brown has already had some practice as a lecturer, having, under the auspices of the London Society for the Extension of University Teaching, delivered a course of twelve lectures on "Greek Life and Culture," which have met with commendation.

The building of the new Medical Class-rooms is progressing favourably, and it is hoped that the Chemical Department may be fit for occupation next session, the rooms at present in use being crowded to excess, and very ill-ventilated. In the centre of the quadrangle of the new chemical department, a ventilating shaft and chimney has been erected, which has given rise to a paper war amongst those interested in the amenity of the city. It is objected that, both as regards material (white brick) and form the shaft bears too great a resemblance to an ordinary factory-chimney, and tends to vulgarise the otherwise very remarkable and elegant group of buildings to which it forms an appendage. There is undoubtedly some truth in this notion, but it would not be an improvement, as some suggest, to cause the shaft to assume the form of some other feature, such as an obelisk or a campanile. Mr. Anderson, in his first design, showed two separate shafts, one acting as a smoke-vent, the other as a ventilating-shaft. Both of these were intended to be in stone, and would have formed characteristic features, having been treated in a distinctly artistic and expressive manner; but these he has had to abandon for the more economical feature now in question.

Another indication of the prosperity of the University is to be found in the increased attendance at the botanical classes. The lecture-room at the Botanical Gardens is seated for 350, but instruction has been imparted by the Professor to upwards of 500 by separating the students into two classes and lecturing twice daily. A new building has been designed in which provision will be made for 600 students, and the room to be vacated will be used for practical studies. The erection of the new building will necessitate considerable alterations in the laying out of the ground at the northern entrance to the gardens, but on the ground to be cleared there are fortunately no specially valuable trees or shrubs. The ground is rather choked up at this point, and the opportunity will be embraced of opening up the approach to the conservatory and palm-house. The new building will be octagonal in form, and will abut upon the west gable of the present class-room. The plans have been prepared in her Majesty's Office of Works, and operations are expected to be begun so soon as the necessary funds are voted by Parliament.

The poorhouse for the parish of St. Cuthbert, erected some years ago on the rising ground to the west of Fettes College, has, for a few years past, been found inadequate to meet the requirements of the parish, and plans for additions to accommodate 192 inmates have been prepared by Messrs. D. & J. Bryce, involving an outlay of about 10,000*l.* The additions consist of wings at either end, in front of the main building, of four stories in height, the upper one being contained in a high-pitched roof lighted by dormer windows. Each of the wings has a separate staircase, and can be shut off from the main corridor.

A new United Presbyterian Church has been erected in the High-street of Portobello, from designs by Messrs. Stewart & Menzies, architects and civil engineers. The building is Gothic in style, and exhibits more of the engineering spirit than of architectural knowledge, some of the details being exaggerated in the most extraordinary manner. The church consists of a nave, 61 ft. long, and transepts 66 ft. wide. At the north-west angle there are a tower and spire rising to a height of 130 ft., which form a conspicuous object from many points of view. The principal entrance towards the High-street is flanked by buttresses, having attached foliated finials, and on each side is a two-light window with cusped tracery, and the upper part of the gable is pierced by two large windows and a traceried circular window. The side elevations show three large traceried windows, with intervening buttresses, and the transepts have four-light traceried windows, with

circular window above. There is a gallery over the main entrance, which is approached by a stair in the tower, and accommodation is provided for a congregation of 700. The pulpit is placed in a recess at the south end, and is backed by panelled timber work with crenellated top and finials, and over this is a wheel-window, filled with stained glass by Messrs. Ballantine & Son. The roof is of open timber principals, plastered across at the collar-beam. When the scaffolding was up for the erection of the spire, it formed a very striking feature as seen from the railway, suggesting the idea that a tower would have been more effective on the site than a spire. Some of the designs submitted in competition showed such a feature.

MUSSELBURGH.

WHILE most of the towns and hamlets of Midlothian are making progress more or less rapid, there is one most conspicuous instance of the converse position in the case of Musselburgh, —an old-world, old-fashioned, half-fishing, half-manufacturing town, situated at the mouth of the river Esk, and, next to Dalkeith, the most populous township in the county. It forms one of a triad of Parliamentary burghs on the east coast; the other two being Leith and Portobello. But long before either of these municipalities had risen into existence, Musselburgh was already famous.

"Musselburgh was a burgh
When Edinburgh was nane,
And Musselburgh will be a burgh
When Edinburgh is gane!"*

So sang Thomas the Rhymer, or some other ancient poet and prophet of the same era; and whatever we may say about the probable truth and fulfilment of the prophecy, the poetry is true enough. Musselburgh was not only a burgh in the modern, but in the ancient Anglo-Saxon sense of the word; and long before the Saxons or the Northmen, or the Danish men, had set their foot on the fertile shores of the river Forth, the Roman galleys rode at anchor in its beautiful little bay of Fisherrow, which thus constituted a seaport of the province of Valentia.

During the Middle Ages, Musselburgh was also celebrated in the civil and ecclesiastical annals of Scotland. Its original name was "Eskmouthe," by which it is mentioned once or twice in the pages of that veracious chronicler "Simeon of Durham," as early as the seventh century. It appears also from other records to have had a maritime and agricultural population throughout the whole of the Northumbrian period. In the year 1201 it begins to figure in the contemporary chartularies as "Muschelburg," which accounts for the etymology of the name; and it was here that the barons of Scotland assembled to swear "fealty" or allegiance to the infant son of William the Lion of Scotland, who was afterwards King Alexander II. In the reign of King David I. a grant was made of the manor of Great Inveresk, or "Musselburghshire," comprehending Musselburgh, Fisherrow, the church of Inveresk, with its tithes and pertinents, together with the mills and fishings of the manor, to the Abbey of Dunfermline; and this grant, like others of Saint David's, was confirmed in the year 1236 by a bull of Pope Gregory IX. From the original grants the monks enjoyed a baronial jurisdiction over the manor; and from the date of its confirmation they acquired the increased jurisdiction of a regality. Alexander II., in the year 1239, granted to the monks a right of free forestry over all the lands of the district; and Robert III. gave them all the new customs which were levied upon the burgh. We may just add here that, even at this early period, the altar of our Lady of Loretto had risen into that importance which gradually obtained for it the character of the most celebrated shrine in Scotland. The chapel and hermitage stood on the margin of the links immediately beyond the ancient eastern gate of the town; and it was nearly as well known and frequented during the Middle Ages as its celebrated Italian prototype and namesake, and was believed to possess the same degree of sanctity and power of supernatural cure. Its pilgrimages were equally famous, and comprised as numerous an army of devotees. Even King James V. performed a pilgrimage on foot to the chapel of Loretto from Stirling so late as the year 1530, before setting sail for France to marry the celebrated Mary of Guise. No trace of it now remains for the study of the archæologist. Of this noble shrine there is absolutely no vestige to be found in Musselburgh at this moment. The ancient chapel has given way to a modern school; and the gardens and orchards once sacred to the prayers and orisons of the pilgrims are now the scenes of juvenile games and the diversions of a public school. The very courteous head-master did his best to show us some sculptured stones on our last visit, but we could discern nothing of an earlier date than a pediment of the Elizabethan age, built into a side wall of the garden.

Musselburgh, we may mention incidentally, is celebrated as a centre of the celebrated game of Golf, a pastime which is almost peculiar to Scotland,* although we have observed it has now crossed the Tweed. It is uncertain when the game was introduced into Scotland, but it was practised by all classes during the reign of King James II. Charles II. was engaged in playing a game on Leith Links during his visit to Scotland in 1641, when the news was brought to him of the rebellion in Ireland, whereupon he threw down his club and returned in great agitation to Holyrood House.

The river Esk, which cuts the burgh into two sections, takes its rise in two branches among the springs of the Pentland Hills, united, as we have seen, at Dalkeith; and, swollen in its devious and tortuous passage through the beautiful glens and valleys by innumerable brooks and rivulets, flows through the arches of the old Gothic bridge which still connects Musselburgh, in one of its principal thoroughfares, with Fisherrow, in a slow and half-sluggish condition. Although still much polluted, we are bound to report that the river is a perfect pattern of purity now as compared with its filthy and disgusting condition some ten or twelve years ago. This is, doubtless, due to the greater care and conservancy of the river, induced by the result of the celebrated Esk pollution case in the Court of Session, which some of our readers may remember by its jocular title of "The Lairds against the Millers." In that well-known and protracted trial the Lord President (Inglis) laid down the law in a weighty sentence, which cannot be too often repeated,—that the upper proprietors of a river are bound to send down the water to the lower proprietors *undiminished in quantity and unimpaired in quality*. The paper-makers accordingly had to erect an expensive series of retaining-ponds for their liquid refuse; and the Messrs. Cowan, with their well-known spirit and enterprise, removed their esparto-mills altogether from Penicuick to the mouth of the river at Musselburgh, where at this moment the manufactory of the pulp forms one of the leading industries of the district. Hard by these esparto-mills we noticed another curious manufactory of fishermen's netting, which is also carried on to a very large extent. We may mention here that we have ourselves observed very large trout taken out of the river Esk in the grounds of the Marquis of Lothian at Newbattle,—a phenomenon to which the inhabitants of the Esk valley have been unaccustomed for the space of a quarter of a century.

The modern buildings in Musselburgh are hardly worth noticing, if we except a very neat episcopal chapel in the early English style, built on Sir Archibald Hope's grounds, and one or two villas, particularly those in the neighbourhood of Inveresk. The old town-hall has no architectural value whatsoever, unless its antiquity go for something, for it is certainly the most peculiar-looking town-hall we have seen in Scotland or anywhere else. Of course, it was originally a prison, or "tolbooth," and was built about the year 1590 from the materials taken from the Chapel of Loretto; for which dilapidation of so sacred an edifice, by the way, the burgesses of Musselburgh were annually excommunicated at Rome for sacrilege during the long period, as Fullarton tells us, of two hundred years. The council-chamber, which we looked into, is of a more modern date, and is the scene sometimes of very stormy discussions. With regard to the drainage of this ancient burgh, the less we say the better. We question very much if such a thing exists. The water supply is derived from the Edinburgh system, and has only been recently introduced. After taking a look at the very picturesque fishing cobles, with their single lug-sail, crawling slowly sout of the small harbour of the Fisherrow to the broad and blue waters of the Firth of Forth, we observed at the Musselburgh station a marble statue of Dr. Moir, the "Delta" of "Blackwood," which put us in mind that this spot had been the scene of the lives and labours of not a few eminent Scotsmen.

But, unquestionably, the "pearl of great price" in Musselburgh is the old-fashioned historical mansion of Sir Archibald Hope, of Pinkie, with a glance atw hich we shall conclude these hurried notes. Pinkie House stands within a belt of fine old trees and shrubbery, at the south-west extremity of the High-street, and bears something of the same relation to Musselburgh that the Bucclench palace does to Dalkeith. The salient points of this remarkable old house are briefly these. It is of a very early Scotch baronial style,—a low quadrangular building, obviously unfinished, with very steep gables and projecting turrets. A sculptured fountain stands in the foreground, in the well-known form of a crown, or rather a Papal tiara, which distinguishes the fountain in the esplanade of Holyrood Palace, and, from the circumstance of its also being found at Linlithgow, would seem to be a characteristic of Scottish baronial architecture in its original and probably its highest form of expression. An air of antiquity, indeed, hangs over the whole town,—which, however, is no manner of excuse for sluggishness; and, as we understand, there are plenty of Police Bills at the command of the municipal government. Let us, therefore, express the hope that Musselburgh may soon do something to emerge from its old-fashioned condition; and, like its Parliamentary neighbours Leith and Portobello, address itself to the work of improvement and reform.

* This curious old stanza will be found in "Chambers's Popular Rhymes of Scotland." Edinburgh. 8vo. 1842.

* Golf derives its name from the "Club" (Ger., *Kolbe*; Dutch, *Kolf*), with which it is played. See an article in Chambers's "Encyclopædia," vol. iv., p. 823.

THE CORPORATION IMPROVEMENTS AT WHITEFRIARS AND THE NEW CITY OF LONDON SCHOOLS.

THE new streets and other improvements which have for some time been contemplated on land lying between Tudor-street and the Thames Embankment are about to be carried out, and preparatory to the commencement of the works the building materials, fixtures, and fittings of about twenty houses, ranges of warehouses, sheds, stabling and workshops in Temple-street, New Wharf, Grand Junction Wharf, Phœnix Wharf, and Tudor-street, were sold by auction on Tuesday, by Messrs. Horne, Eversfield, & Co., and the land will now immediately be cleared. The improvements include the construction of a new street, running north and south between Whitefriars-street, at its Junction with Tudor-street, and the Embankment, which will open out a direct line of communication between Fleet-street and the Embankment.

The first portion of the works in connexion with the erection of the new City of London Schools, at the south-east corner of this land, and facing the Embankment, has already been commenced. The land has been enclosed, and the ground is being excavated and levelled preliminary to getting in the foundations, for which Messrs. Hill & Higgs are the contractors.

PRINCIPAL ENTRANCE, SANTA MARIA DEL MAR, BARCELONA.

THE historical church of Santa Maria del Mar is one of the oldest of Barcelona, and, perhaps, also of the province of Catalonia. A chronicle of the sixteenth century attributes its foundation to the Goths; according to another tradition, it is supposed that the primitive church, named Santa Maria de las Arenas, occupying the same site on the seashore, was erected upon the ruins of a Roman temple dedicated to Minerva.

The present building, next to the majestic cathedral the principal temple of the noble city of the house of Condé, was commenced in the year 1329, and finished in 1377. It consists of a nave and two aisles, and may be described as at once bold and elegant. They are separated by grand columns, which sustain nineteen arches and lofty vaults.

The exterior corresponds with the interior. The two high Gothic towers include much beautiful work, and the four portals, one in each façade, are justly celebrated.

Our engraving represents the principal portal.

PRINCIPAL ENTRANCE, SANTA MARIA DEL MAR, BARCELONA, SPAIN.

THE BELGIAN EXHIBITION OF 1880: TRIUMPHAL ARCH.—M. BORDIAUX, ARCHITECT.

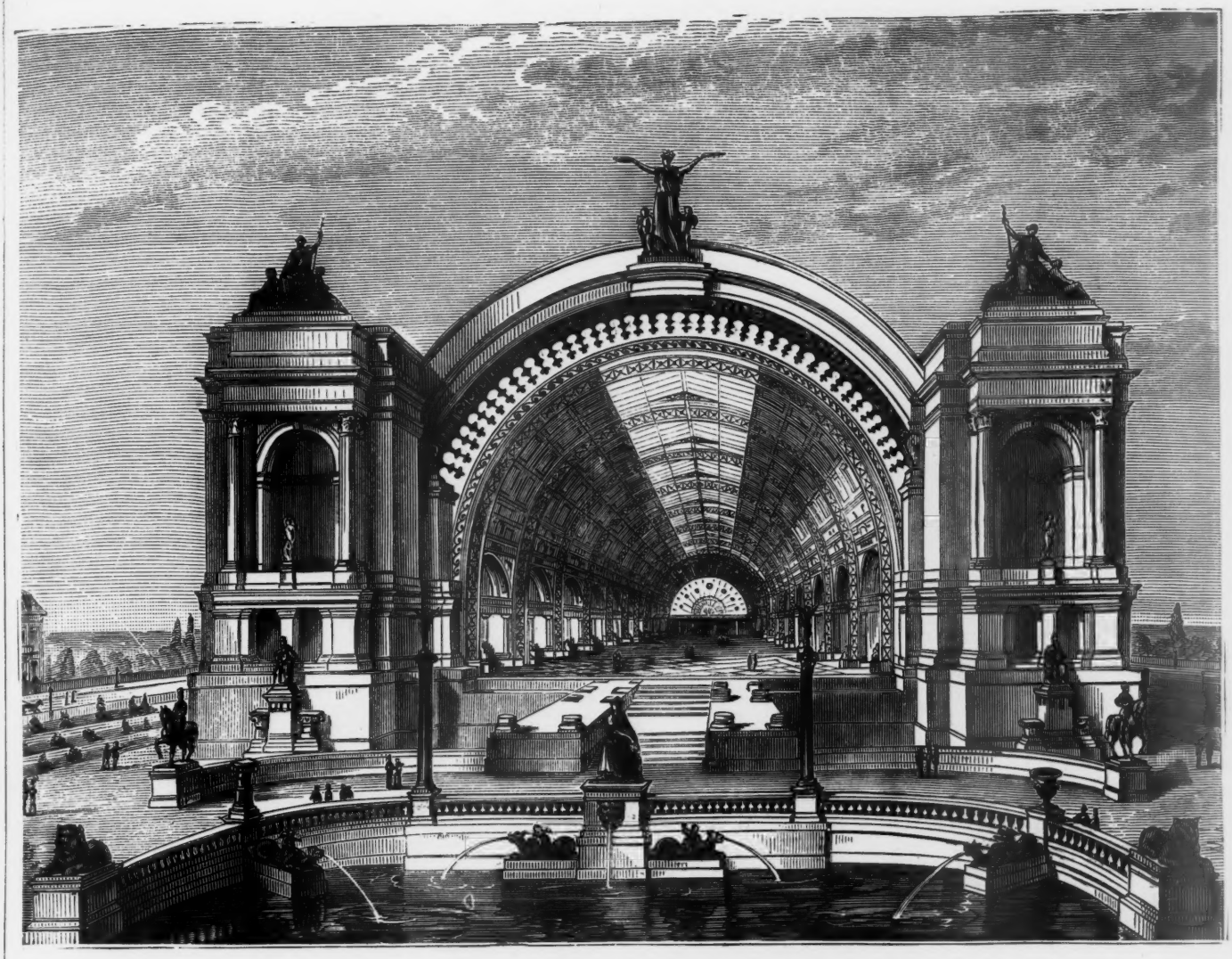
THE BELGIAN EXHIBITION, 1880.

IN mentioning recently the opening of the Brussels Exhibition,* we spoke of the building as including a semicircular colonnade, with a large portal, forming a triumphal arch, surmounted by a colossal group, the colonnade uniting two "pavillons" with colonnaded wings. We now give a view of the triumphal arch, and of one of the pavilions, as designed by M. Bordiaux, architect. The pavilions are the only substantial parts of the whole yet completed. They, in fact, form two separate buildings, standing boldly out in advance, the lateral extensions of the whole front being in a line with the central portico of the colonnade. At present this adds to the effective appearance of the pavilions, but greatly dwarfs the rest. As to the final effect which this arrangement will have upon the outward appearance of the whole, it is far too early to judge; for the two sides of the central portal are but raised to half their height; the arch is but scaffolding, and only the basement of the semicircular colonnade has been built, all the rest is wood, canvas, and rather clumsy make-believe, as is also the case with the colonnaded lateral extensions. Built substantially, finished artistically, and admirably situated on the old Champ-des-Manœuvres, the exhibition building would present a front that any Belgian might contemplate with pardonable national pride as he approached it from the broad length of the Rue de la Loi. Whether the eyes of the young nation are not larger than its hands, and whether time and money will serve to make this great front of the Belgian Exhibition building all that it is designed to be before the exhibition itself comes to an end, remains to be seen.

Along and against the basement of the semicircular colonnade, on each side of the central portico, there is in course of erection a great amphitheatrical gallery, where spectators will be grouped at the several fêtes which during the next three months are to be held at the exhibition. The intervening space, lately cut up with traffic, and encumbered with constituting portions of portico, colonnade, and gallery, is now handsomely laid out. The great open space leading up to the building is already putting on the appearance of a beautiful garden. It is laid out rather more according to the rules of pictorial art than refined taste, and the many rather than the few will be consulted. The many, especially in the hot summer weather that is yet to come, will remain longer outside than in the building, footing the broad meandering walks, amid trees, flower-beds, cascades, waterfalls, and fountains, and in, and out, and around the erections now being raised to exemplify strength, taste, or wondrous utility in the building art. There will be but two restaurants in the grounds, one of *premier ordre*, the other *à pointe du jour*; but several *buvettes* will supply cold meats and other substantial refreshments; while more than one tasteful building offers all manner of fancy non-alcoholic drink, and the very fragile refreshments that French confectioners purvey.

The great iron and glass parallelogrammatic case that lies behind the architectural façade of the main building, and wherein the nation shows its ruder and rougher handiwork, is fully completed, and the arrangements for light and air promise to be effective, and to present a great contrast to those of the exhibition at Paris in 1878. Wood is judiciously introduced into the roofing, and the arrangements of white and very artistically colour-bordered canvas for subduing the light and guiding the currents of air are judicious and effective. The agricultural and woods and forests departments alone had their exhibits fully laid out, and were ready, with floors swept clean, for view when the exhibition opened. All the rest was more or less disorder, while in many parts the fittings for intended exhibits were wanting to the extent of whole groups, and chaos reigned. Still, judging from the compartments more or less forward, the

* See vol. xxxviii., p. 777.



THE BELGIAN EXHIBITION BUILDING: PAVILION.

provision alike for exhibitors and spectators is ample, and everything will be easily seen, and all may see it. The internal arrangements, decorations, and fittings of the pavilion of modern art present a *tout ensemble* of artistic beauty most admirable; and those of the pavilion of ancient art are complete. The great avenue and vestibule leading from the great central portico so long a way from completion, will, it is feared, from the gold and Dutch metal now being expended upon them, be somewhat of a glaring failure. But one must withhold judgment until the decorations are nearer completion.

That the buildings and erections of the exhibition should have been opened in so unfinished a state is to be deplored; but 70,000 square mètres are a great deal of ground to cover in the time that has been allotted for the work. The Belgians are not inexperienced in such works, but this is a much larger undertaking of the kind than any they have yet compassed, being fifteen times the extent of their Halles-Centrales in 1874, and seven times the space occupied by the objects of health and for the preservation of life in 1876. They have complained that the exhibition which they made of their national industry in Paris in 1878 cost them a million francs, and have boasted that this will cost them but 200,000 francs more. That boast is over, and they are now willing to expend double the estimate, provided that the exhibition be but a success, and win for their country the admiration of Europe in general and great surprise and a little envy on the part of England in particular. Special facilities are to be given to the English to go and see, judge, and compare. At a conference in Brussels between representatives of the South-Eastern, London, Chatham, and Dover, and the Belgian State railways and of the Belgian marine, it was resolved that at stated periods during the exhibition and *fêtes* of the jubilee, return tickets between London and Brussels, *vid* Ostend and Calais, should be issued for a single fare.

NEW (R.C.) CHURCH OF ST. FRANCIS, GLASGOW.

THIS church, which is now being built for the Franciscan Friars (the Very Reverend Father Cuthbert Wood, guardian), is situated at the corner of Cumberland-street and Mathieson-street, in the south side of Glasgow.

It is being built entirely of Williamswood stone, both for facings and dressings. When finished the church will consist of chancel and chapels, nave, aisles, baptistery, choir for the friars, west gallery, and corridor connecting the friary with the church. The nave, which is the portion now in course of erection, consists of seven bays, and is 150 ft. long. The nave is 38 ft. wide, and the aisles are 13 ft. 6 in. wide, the total width being 72 ft. The height to the wall plate is 60 ft., and to the ridge 96 ft. In the clearstory there are triplets of lancet-windows, which will form one bold lantern, a most necessary feature in a town like Glasgow. At the west end there is a buttressed staircase which leads to the gallery. The roof is composed of framed main and intermediate principals.

The church is very severe in style, and quite in harmony with the order for which it is being built. It is not generally known that the Franciscan fathers are one and the same with the "Friars Minor" or "Grey Friars," and the following few particulars of the ancient foundation in Glasgow will be interesting to some of our readers.

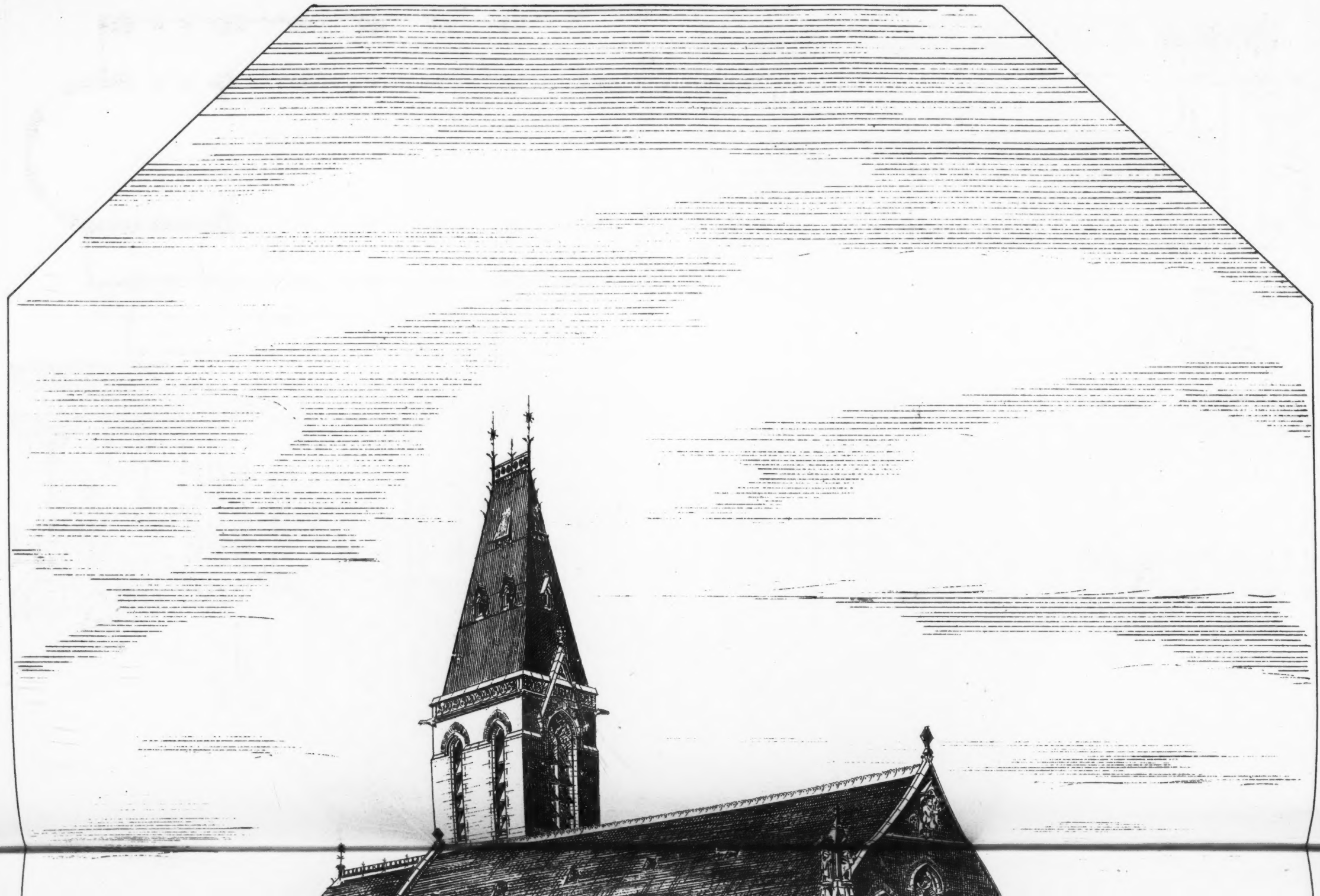
The Friars Minor came into Glasgow in the year 1449, at the instance of Bishop William Turnbull, then bishop of Glasgow, and were lodged in a private house in or near the High-street, where they were generously supported during twenty-six years by the Very Rev. Thomas Forsyth, a canon of the cathedral.

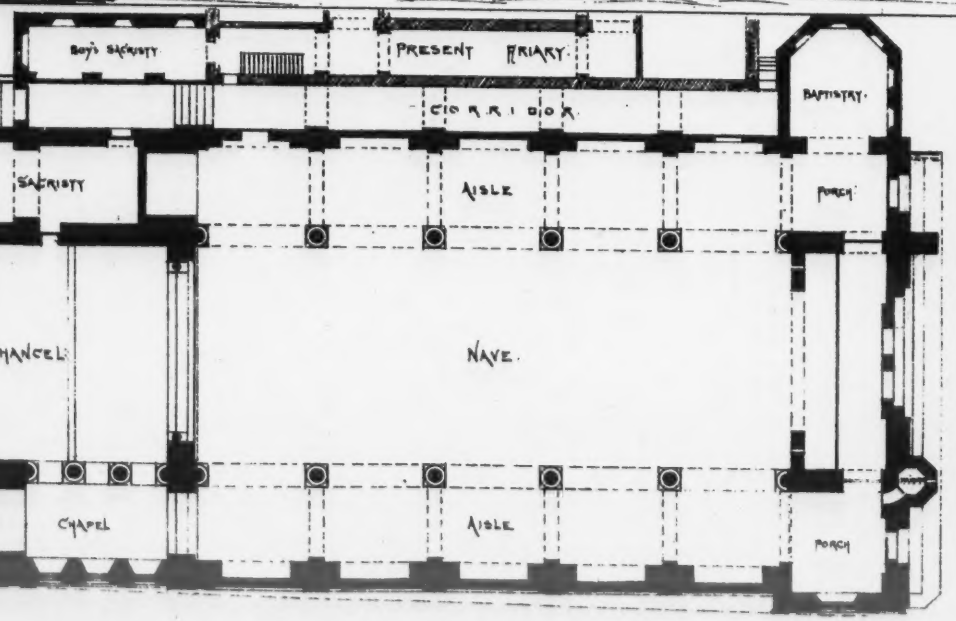
Under the episcopate of Bishop John Laing, his private residence was extended and formed into a regular friary in the year 1476. This bishop assisted Canon Thomas Forsyth in erecting a church and cloister, and on the ninth Sunday after Pentecost solemnly consecrated the same in honour of the Mother of God. Bishop Turnbull sent the first F. Guardian of the Glasgow Friary (F. James Muirhead) to Rome to obtain the Bull of Pope Nicholas V. for the foundation of the Glasgow University. The first Professor of Philosophy in the same, Elias Forbes, afterwards became a Franciscan, and died in the Glasgow Friary. F. Francis Govan, second guardian of the house, was the first provincial of the restored Scotch Franciscan Province. The friars were expelled from their home in 1560, and their church and house ransacked under the Duke of Chatelherault and Earl of Argyll.

After an absence of 308 years, the Friars-Minor were re-established in Glasgow, on the south side, in 1868, and took possession of their new friary in 1862,—the same year that the city improvements swept away the last remaining portions of the ancient structure, which, along with the "Grey Friars Wynd," become things of history.

The church, which is rapidly rising, is expected to be completed about the middle of next year. The whole is being carried out from the designs and under the superintendence of Messrs. Pugin & Pugin, of Westminster.

The original estimate for the nave was 10,060*l.*, but subsequently another bay was added, which raised the total cost of that portion to about 12,000*l.* Mr. John Devlin, of Glasgow, is the contractor; the clerk of works is Mr. Dalton.





The Franciscan Church, Glasgow:

for the Vr Revd Father Cuthbert, O.S.F.

Pugin & Pugin - Archts. Westminster, 1880.

Whiteman & Bains *Photo-Lithe* 23 b. High Holborn

Wyman & Sons, Printers.

THE INFLUENCE OF ART AND THE DRAMA ON RELIGION.

THIS was the subject of a discourse delivered on Sunday morning last (*apropos* of the death of Mr. Tom Taylor) by the Rev. Jeffery Worthington, at Brixton Unitarian Church, Effra-road. Taking as his text the fourth, fifth, and sixth verses of the twelfth chapter of St. Paul's First Epistle to the Corinthians,* the preacher observed that the "diversities" of which the apostle speaks may be taken as inclusive of a range extending far beyond the circle of "gifts" and "administrations" and "operations" exercised within the immediate fold of the Church. St. Paul, in the chapter from which the text is taken, is writing of "spiritual" gifts. But surely we may here reckon a vast variety of powers that are accessory to and often directly promotive of the reign of a true faith and a pure religion. Who, for instance, shall estimate the influence of so-called secular art and literature in relation to religion? I have no intention of dwelling upon the somewhat debated question of the introduction into our actual worship of God of extensive art surroundings, although I have never had any hesitation in avowing the deep-seated conviction that, when taking a due place only in relation to matters of the foremost importance, a careful attention to "the beautiful," both in God's House and God's Acre, may be made a large means to a noble end. Not to offend, but rather to satisfy, the eye and the ear, undoubtedly aids the reverence of many, and surely need hinder the prayer and praise of none. There are but few, I think, who gaze upon the vaulted roofs and stately proportions of some venerable cathedral, or upon

"Each minute and unseen part,"

as wrought with loving hand by many a humble devotee of art, without a sense of peace stealing over the heart, which is a fit preparation for the attitude of adoration; while that man must be indeed devoid of some manly attribute on whom the swelling organ and the solemn anthem, or the apt words of eloquent pleading from an earnest brother's soul, tell no tale whispering of saintly things. This, however, is not the matter for chief consideration to-day. I have in mind the relation of Art and Literature with Religion, taking Art and Literature in that sense which is, with a certain absence of precision, termed secular. During the past week there was removed from the midst of an honourable career,—and that with a measure of suddenness,—a neighbour of ours in this South London district, who has been for many years intimately associated with the world of art as well as of literature, and his death seems a not unfit occasion shortly to dwell upon the theme which has been suggested. It was, perhaps, as one specially apt to descry and to point out the original genius of others, that the late Tom Taylor (who was two days ago followed to the grave by a gifted company of mourners) excelled. Yet he was not without a measure of originality of his own, else he would never have attained the eminence he did. He exercised his powers, perhaps, most particularly in three directions: as a professed art critic, as a dramatic author, and as the editor of a well-known publication, at once passingly popular, and most incisive in good-natured satire of the foibles of our public men and our every-day customs and fashions. Let us take these three directions of our departed brother's work in life, and examine the bearing of each upon the cause of religion.

I.—As I thought over how I should speak this morning, there lay before me on my table a couple of volumes consisting of a catalogue of a great "Art Treasures" exhibition, held twenty-three years ago, and of the handbooks to the various departments, in which, though originally prepared anonymously for the current literature of the day, I have reason to know that the deceased critic had a considerable share. The exhibition to which I refer was held in the great commercial city of Manchester,—the centre of a district more populous than any other in the Queen's dominions. In that same centre the last week has witnessed the formal proceedings connected with the foundation of a new English University. "What do you want with a University in Manchester?" has been the question of many. And, curiously enough, a quarter of a century ago, a noble duke (on being applied to for a contribution from his gallery to the exhibition to which I have referred) is said to have inquired, "What in the world do you want with art in Manchester?" The fact is that wherever there is a great population, and where a desire exists on the part of the cultured few to raise and refine the standard of culture amongst the many, there it will be found that efforts will be made to introduce the potent influence of art as well as of learning. It cannot often happen that great collections of art-treasures, such as the one to which I have alluded, can be placed within public reach. The works of noted excellence have become private property, and can only be gathered together by means of much labour and self-denial. Once in a generation only, perhaps, can the matter be accomplished. Yet even such an occasional exhibition is of unspeakable value. It helps to create a taste,—to promote a craving,—for the beautiful, even in the most prosaic of people; and this taste, this craving, leads to the adoption of means for its satisfaction. Annual exhibitions of works of art have long since ceased to be confined to the metropolis; while not only the mansions of the rich, but the cottage homes of England, are increasingly adorned with the insignia of a larger appreciation of art, and a more refined taste. The inexpensive reproductions, through latterly-devised processes, of some of the finest known pictures and statuary, have helped on the good work, and the man who has aimed to popularise a knowledge of the rules of art, and to educate society by his appreciative criticism, is worthy of a place amongst those upon whose tomb a garland of honour shall be thrown. Will any one ask what is the bearing of all this upon religion? It is, indeed, sadly true that history bears record of those who adored the outwardly-beautiful, and knew, seemingly, no deeper thought. Yet it may be that they, even, were less coarse and brutal than otherwise they would have been. And how, in other cases? Questions concerning what has been aptly termed the "Philosophy of the Beautiful" must not come under lengthy consideration now. This, however, may be said, to use the phraseology of Victor Cousin,—that "Art is the representation of the ideal." And here we touch the key-note of an answer to the question. Passing by the current fashion of excessive realism in art,—which its noblest devotees have always acknowledged as connected with a sincere effort to school the artist for higher things,—let me quote a sentence or two from Cousin's discourse,* translated into our own tongue:—

"Nature is an artist that enwraps the ideal in variable contingent forms, and these forms, more or less debase the moral idea enshrined within them. Art is a perfected Nature that conceives of unity beneath variety, of the general with the particular, the moral with the physical, the absolute with the relative, the ideal with the real, and that strives to reproduce the object of this conception, but by means more faithful. Art imitates nature in this sense: it draws out the moral idea sketched in every object. Art surpasses nature in this sense: it renders the forms more pure and more in unison with the moral idea they express. Art undoubtedly does not *realise* the ideal in very deed, but it bestows upon it more clearness and higher majesty. It is in this light that we must understand this sentence, 'Art is the representation of the ideal.'"

The author from whom I have borrowed this suggestive thought includes here a reference to Poetry and Music, placing Painting, Sculpture, and Architecture last in rank, "because [he asserts] their action, more limited, has in view works more special and confined than that of Poetry or of Music, and consequently at a greater distance from the ideal." Finally, setting a law before the artist, Cousin adds,—

"Endeavour to appreciate by your taste the beauty presented you in Nature, but do not be contented with this merely meditative opinion, which belongs chiefly to the philosopher; display your genius; set the ideal free from the enthralment of the real, and bring back the absolute afresh, clothed in purer forms. If you shut yourself up within the narrow boundary of the individual and the variable, your works will vanish and be forgotten, like all that is changeful. That you may live for ever in the hearts of other men, lay hold on that which never passes away, the absolute, the ideal, the pure idea of the beautiful; this is one of the manifestations of Infinite Being,—of God."

And thus, it seems to me, we are led to a conception of the manner in which Art is the handmaiden of Religion. The true artist cannot satisfy his conception of the ideal, doubtless. But if he does his best, he rouses the noblest sympathies of his fellow-men, and leads them also behind the veil that hides the solemn mysteries.

II.—Having under review the varied labours of the man whose just-terminated earthly course has suggested these remarks, we have next briefly to note the bearing of the Drama,—and more particularly of a certain class of the Drama,—upon the religious culture of to-day. Time *was*,—and time *is*, in certain quarters,—when to place the two terms, "the stage" and "the pulpit" in any sort of juxtaposition were to commit a terrible impropriety. Yet, at the present moment, we have actually existing, amidst the numberless societies and clubs of London, one specially designed to bring together the teachers of the stage and the teachers of the Church, or, in other terms, those professionally connected with the drama, and the clergy of the Established and other Churches. The association appears to have a considerable measure of success, and the aim set before its members, viz., to raise the high moral tone of the great mass of the people, is surely pure and virtuous enough to secure such sympathy and support as may be accorded. None who know the history of the *English* stage,—to specialise the criticism,—but must admit in sorrow the misuse to which it has often been subjected, and a plausible excuse has, indeed, existed for those who avow themselves distinct opponents of the theatre under any practically possible conduct. I am disposed, however, to the conviction that the good far outweighs the possible evil, which is not, indeed, when the stage is duly supervised, in any way the direct outcome of the theatre itself. I spoke just now of the fact that a particular class of drama was suggested to us to-day, referring to the fact that the late Mr. Taylor chiefly exercised his dramatic faculties by seeking to "hold the mirror up to Nature,"—to delineate the joys and sorrows, the temptations and conquests over temptation, of his heroes and his heroines. The same critical faculty which enabled him to point out the excellence or the defects of a work of art,—which also, indeed, gave him the power of sketching the biographies of Haydon and Sir Joshua Reynolds,—further came to his aid when dealing with the characters introduced upon the stage. Doubtless in the case of the drama,—as in the cases of poetry, music, and painting, the *dictum* of Cousin that "art is the representation of the ideal" may be accepted, and the greatest dramatic masters produce their *dramatis personæ* in consistence with a carefully-elaborated study of mankind at large. Contemplation has been evoked, and in the creatures ultimately made to strut upon the stage, *all* men recognise features and traits of character in which *they* have a share, and for which they are conscious of a deeply-seated sympathy. But a more ordinary type of the drama,—and one which is especially popular in these days,—finds its sphere of work in what may perhaps be compared with the realistic school of painting. The characters of the play are just such as may be met with any day in the City bank or the West End drawing-room, in the workman's cottage or the nobleman's mansion, in the haunts of vice or amidst the ways where virtue shines triumphant. We see our neighbours photographed, and sometimes ourselves too. And though we may affirm that here is not the highest form of the drama, yet we must admit that there is presented to us a form which may be made highly conducive to good morals,—ay, very helpful to the cause of that true religion which crowns morality with its own beautiful crown of Faith, and Hope, and Love. There is a power in hand, then, here: one that may be made to preach sermons to those whom, alas! the pulpit does not reach.

III.—I have left myself but a moment or two to speak of the late Mr. Taylor's editorship of the most popular of our satirical periodicals. But the healthy influence exerted over a circle that scarce knows a bound needs no new assertion or proof. In many a happy home,—in every newsroom of the land,—at each railway bookstall,—through the window of its birthplace in Fleet-street,—the genial humour and merry wit of *Punch* are enjoyed to the full. None ought to be offended by its sallies, and many should be warned by its half-veiled wisdom. I go further, for I am well convinced that faults have been corrected, and moral victories achieved, through the instrumentality of this keen, though generous, monitor. Now and then, moreover, we have noted in its pages some record of tender memories and loving

* "There are diversities of gifts, but the same Spirit. And there are differences of administrations, but the same Lord. And there are diversities of operations, but it is the same God which worketh all in all."

* "The Philosophy of the Beautiful." By Victor Cousin. Translated into English by J. C. Daniel.

honour of brethren gone to the far-off land (far-off and yet so very near!); and we have felt how, behind the critic's lash, was concealed the spirit of Christian feeling and Christian trust. I doubt not but that, ere many days are over, we shall read a similar "*In Memoriam*," associated with the name I have named this morning, and that we shall be assured how we shall miss from our midst one whose pure motive and high intent rendered him not only a valued private friend, but also a devoted servant of the brethren whom he saw, and of the God whom he could not see.

PRIZE DRAWINGS AT SOUTH KENSINGTON.

THE drawings, and a few models, for which prizes have been awarded by the Department of Science and Art this year, have been, as usual, collectively exhibited in one of the exhibition galleries adjoining the Horticultural Gardens. We may add that they were very inconveniently placed for visitors in a far remote gallery on the upper floor, the route to which was not to be found without a good deal of interviewing of police officers. If it is desired that it should be a subject of interest to the public, it would be better to exhibit the collection in a more easily accessible room, and give some clear announcement of it at the proper entrance.

The whole collection of drawings does not show any material alteration in general merit from those of last year. As usual, the decorative work is the best. The figure-drawing does not show any attempt at original thought or design; on the contrary, one cannot but be impressed with its exceedingly prosaic character. The drawings from the life seem mostly taken from models possessing no qualities which could be said to lend themselves to the suggestion of graceful or picturesque pose or expression; and one cannot help feeling a doubt whether this kind of rather laboured drawing from inferior models is at all likely to evoke in the students any feeling for the really expressive power of the human figure. Of careful and painstaking work there is a good deal; but we confess to a feeling that there is a good deal of vulgarity in the drawings of this class, arising partly from the subjects, partly from the want of style and feeling in the artists. To copy carefully and in a black heavily-shaded style, the imperfections of some rather ill-shaped figures, seems a process too much calculated to stifle the real art-feeling in the mind of the student, and substitute for it a cold attempt at mechanical accuracy. One does not, of course, expect studies from the life to represent always Apollos and Venuses, but we have seen many studies that represented much more of artistic feeling than these. The drawings from the round (casts) are mostly good; and some of the anatomical studies are very thorough and well drawn. We may mention a drawing in sepia of a skeleton, with the figure outlined upon it, by Mr. W. Fergusson, which is excellent, and has received a "National" book-prize. As far as we can understand the peculiar phraseology of the Department, however, the adjective "National" does not convey that the student has beaten all others in the kingdom in that class of drawing, for the word seems to be tacked on indiscriminately to a very large proportion of the prizes. But we have given up trying to understand the numerous terms which are used in a special sense belonging to the Department alone, whose awkwardness and affectation in dealing with the English language seems part of a system. The prevalence of red tape is conspicuous also in the elaborate system of numbering and ticketing everything, which makes the descriptions of the drawings look like a sum in arithmetic. As a sample: in connexion with one drawing, an architectural one, of no great consequence, we noted the following various numerations: the author of the drawing is in one relation "5759," in another he is "38 N" (if we read the ticket right); at the foot of the drawing "23 A" is placed after his name, and he is described as having received a "National Bronze Medal 420," and a "third-grade prize 712,—1880." It is to be hoped, with all this effort, that the position and status in the Department of the author of the drawing are sufficiently defined to the official mind, though the result is hardly intelligible to outsiders; but one cannot help thinking that if we had more figure-drawing and fewer figures it would be more to the purpose.

There is not much development of oil painting, the most prominent works being three studies of still-life, for one of which a gold medal has been gained by the artist, Mr. Watson, and a silver medal has been awarded to each of the other two. They are not hung in a good light, and are probably, therefore, seen to disadvantage. The gold medal work is carefully finished and harmonious in colour, but is heavy in appearance, and we are again struck, as in the case of the figure-drawings, with the want of artistic feeling; there seems no effort to realise any charm in the grouping of the decorative objects portrayed, only a dull, dead realism. To say of a still-life picture that it is deficient in life may seem a contradiction in terms, but that is the impression these paintings give us. The still-life drawings in water-colour have more sparkle and more feeling for incidents of light and colour, and there are two or three admirable specimens among them. When we come to the decorative work, the standard is much higher, and there is a good deal of design among the works of this class which is as good as it can be in colour and form, taking the artists on their own ground, though we find too much of naturalism, and should like to see a little more studied conventionalism in the wall-paper designs and other things of that class. Among some of the decorative work we noted as very successful a design for a tapestry curtain (Miss Denley, Lambeth); a design very well drawn and coloured, for a perforated Parian vase in Indian style, by Mr. J. Crook, of Worcester,—a place from which one naturally expects ability in designing ornamental ware; various wall-papers, among which one by Mr. Farnsworth (Nottingham) is remarkably good, and has the advantage of being more conventionalised and more thoughtfully composed than most of the others. A sheet of pencil outline studies of historic styles of ornament, by Mr. W. Stevenson (Edinburgh), though not exactly design, shows careful study of the characteristics of different schools of ornament. The design for a ceiling suitable for a synagogue (Mr. Bradburn, Coalbrook-dale), in which emblems of Jewish faith and ritual are worked into the design, has a great deal of merit both in design and in its careful and elaborate drawing. There are many very pretty designs for lace, among which we may single out two for flouncings, by Miss Emily Heise (Birkenhead), which are charming. Some designs for chintzes, by Mr. Sewell, are very pretty and very effective, and suitable; and the Owen Jones prize has been given to Mr. Smith for a design for fireplace tiles, based on honeysuckle, which is very pretty and original, but not quite sufficiently conventionalised to have pleased Owen Jones himself.

Nothing among the architectural work seems worth mentioning. The drawings for which prizes are bestowed are mere commonplace pieces of imitation Gothic, or very ordinary house designs, with no feeling or originality in a single instance that we noticed; all we can say is, that we saw nothing among them so positively and absurdly bad as we remember noticing in one or two former collections. The conclusion from the whole seems to be that the Department is a good school for the promotion of decorative design, but in the other, and what are in some respects higher, walks of art, it has not succeeded in evoking much artistic feeling.

TRURO CATHEDRAL.

IT has just been decided to build a wooden temporary church for use whilst the choir of this cathedral is being built. The structure is to be at once commenced, and as soon as it is up,—in about two months' time,—the present building will come down, all but the south chancel aisle wall, which, it will be remembered, it is intended to incorporate into the new building. The wooden church, which will hold about 400 worshippers, is to be erected on the north-east site, in such a way as not to interfere with the footings of the cathedral foundations; the choir will, therefore, be completed without any interference with the temporary structure. The stones of the old church will be all incorporated in the new walls. The work of restoring the south wall of the chancel to its proper perpendicular will be one of some little difficulty. It is 8 in. out of the upright, and the stone,—a soft Elvin,—being all face-bedded, is terribly decayed. The work upon it is of a particularly rich, though somewhat late, character, not altogether unique in Cornwall, the church of St. Mary Magdelene at Launceston exhibiting similar, even much more elaborate work, all over its exterior.

Under the managing clerk of works, Mr. James Bubb, of London, to whom the carrying out of the work of the cathedral is entrusted, a staff of men are engaged in getting in the footings of the east end of the choir. These go right down to the solid shillet rock beneath, which forms a splendid foundation. The concrete for the foundations is made with the stone of the old houses which originally stood upon the site now to be built upon. The wooden staging that was used at the late royal ceremonial has all been sold by auction, and removed. Both the foundation-stone and the memorial one are of grey Cornish granite. The former is from the Mabe Quarries, near Penryn, and the latter from the neighbourhood of St. Dennis, six miles north-west of St. Austell. The foundation-stone stands upon the plinth of the north-east angle buttress. It measures 3 ft. 8 in. by 2 ft. 1 in. by 11 in. The memorial-stone is at the other end of the church, and occurs in the south arcade, three bays from its western respond. The base and one course of the column that would occur there were fixed prior to the ceremony. Upon this the Prince placed another course, which forms the memorial in question, and since then yet another has been added on the top of it, all in St. Dennis granite. Mr. Dan. Delafield is the foreman.

VALUE OF PROPERTY IN ELY PLACE.

THE value of land and property in Ely-place was shown by a sale of houses there which took place at the Auction Mart last week. Messrs. Fox & Bousfield offered for sale, under an order from the Court of Chancery, ten freehold houses on the east and west sides. Amongst the advantages which the property was said to possess, it was stated that, being on the verge of the City, but just outside the liberties, it was free from many of the burdens of citizenship and taxation, whilst its central position, with facilities of access both from the east and the west, gave it a great value both for professional and commercial purposes. The particulars also stated that as all the ground leases were about to expire, some of the present tenants were only holding on sufferance at nominal rents, and that the houses would be surrendered in good repair. The information was added that Ely-place is governed by its own commission, under a special Act of Parliament. Mr. Bousfield, the auctioneer, before offering the property, which consisted of ten lots, adverted to the substantial character of the buildings, although old, remarking that after having stood for a period of something like ninety-nine years, they were still in the very best of condition, and far more substantial than many other houses which had been erected during the present century. He added that should any purchasers intend to rebuild, they would find in the houses as they now stood some of the very best timber, and other materials equally good. The sale then proceeded, the first lot consisting of a house containing a ground area of 1,138 superficial feet, being sold for 3,520*l.*; lot 2, a house and ground area, 1,120 ft., 3,400*l.*; lot 3, ground area 1,090 ft., 3,500*l.*; lot 4, 1,116 ft., 3,640*l.*; lot 5, 1,340 ft., 2,900*l.*; lot 6, 1,498 ft., 3,600*l.*; lot 7, 1,529 ft., 3,450*l.*; lot 8, 1,538 ft., 3,300*l.*; lot 9, 1,523 ft., 3,650*l.*; lot 10, 1,520 ft., 3,610*l.* The total proceeds of the sale amounted to 34,550*l.*, the average price obtained for the several lots being about 3*l.* per foot.

Public Art Museums.—Through the efforts of the Bradford Free Library and Art Museum Committee, the authorities at South Kensington Museum have been induced to vary in their favour the usual regulations with respect to loans of artistic objects to provincial museums which prevent the loan of such objects to corporations. Hitherto such loans could only be obtained through schools of art, or by electing members of the schools of art as members of the Art Museums Committee. Official information of the change referred to has been received from the South Kensington Museum by Mr. W. T. M'Gowan, Town Clerk of Bradford, and a deputation has been appointed by the Bradford Free Library and Art Museum Committee to confer with the officials at South Kensington with the view to the selection of suitable objects.

WALSALL SEWERAGE SCHEME.

AT a recent meeting of the Walsall Town Council, the chief business was the consideration of the sewage scheme which has been prepared by the borough surveyor (Mr. W. J. Boys), in pursuance of the directions of the General Purposes Committee. These were given after full consideration and final rejection of the schemes which were sent in to compete for the 200 guineas which the Council offered as premiums.

The Borough Surveyor's report on the new scheme commences by stating the general idea in the following words:—"In order that you may be able to thoroughly comprehend the question, it is necessary for me to state that the area of the borough is 8,080 acres, the present population being estimated at 58,460, residing in 10,707 houses, the present estimated daily average quantity of sewage to be disposed of being calculated from a population of 57,000 at 40 gallons per head = 2,280,000 gallons, or 10,178½ tons. The quantity of sewage to be disposed of day by day may appear large, but, after careful gaugings extending over a long period, and taking into consideration the average rainfall at Walsall, which was during the decade ending 1877, ·68 in. per week, or 33·55 in. per annum, I am of opinion that 40 gallons per head per day is the proper quantity to be estimated for. I propose, for the purpose of my scheme, to divide the borough into two districts,—viz., Walsall and Bloxwich,—and to deal with the whole of the sewage from each district separately, by gravitation, and without any chemical treatment whatever. The Walsall district comprises the town of Walsall, Caldmore, Palfrey, Pleck, Bescot, James Bridge, Park Brook, Birchills, Bloxwich-road as far as Pratt's Bridge, Coal-pool, Sargent's-hill, and Park-lodge,—the area being about 5,302 acres, part rural and part urban, with a population estimated at 47,460. The scheme provides an outlet for the drainage of all the places mentioned, and every house, and the estimate includes the cost of all outfall and branch sewers that are, in my opinion, now necessary. The sewage from this district will flow, by gravitation, to the land selected for the purification thereof,—viz., the Brockhurst Farm, and other land adjoining, and will be discharged at three levels commanding the whole of the land. A portion of the Walsall sewage which I propose to discharge into subsidence tanks at the lowest level (i.e., by the outfall sewer near Wallow's-lane, now in course of construction) is largely diluted with subsoil water and waste tap-water; it contains a large quantity of trade refuse of various colours, chiefly from the tanyards and curriers and other trades where dyes are used. The remaining portion of the sewage, which I propose to discharge at higher levels, will be purely domestic, and may be applied to the land direct without passing through the tanks. The Bloxwich district is to the north of Pratt's Bridge, and includes Bloxwich, Blakenall, Leamore, Harden, Wallington-heath, Little Bloxwich, Fishley, Goscote, Sneyd-lane, Broad-lane, and Bloxwich-road coming down to Pratt's Bridge,—the area being about 2,778 acres, with a scattered population of about 11,000. The sewage from a population of about 9,500 residing in the district will flow by gravitation to the land selected for its purification, which adjoins Slacky-lane, Goscote. The quality of the sewage from this district is purely of a domestic character, and may be applied direct to the land. The scheme provides, as far as is practicable with one system of sewers, to exclude the rain water; and ample provision is made for the disposal of the storm water by overflows or storm-water outlets at convenient places." After fully describing the plans showing these details, the report proceeds,—"The land proposed for the purification of the Walsall sewage is known as the Brockhurst Farm, and other land adjoining thereto, near Bescot Station; it comprises an area of 175a. 0r. 36p. or thereabouts, including watercourses, roads, farmyards, and buildings; it is partly situate in the parishes of Walsall, West Bromwich, and Wednesbury, and joins up to a part of the land where the West Bromwich sewage is to be treated. Thirty-four trial holes have been excavated in this land, to an average depth of 5 ft., to ascertain the nature of the ground; these prove that about 152 acres of this land is such that, if properly under-drained, it will be very suitable for the purification of sewage. A portion of the land, about 13 acres, is of a retentive nature and clay, and, in my opinion, is not so suitable; but, notwithstanding this, I have included it in the scheme, believing that it will be more economical to treat for the whole than pay a large price for severance and take a portion only. . . . . The land proposed for the purification of the sewage from the Bloxwich district is situate on the northern side of Slacky-lane, Goscote; it comprises an area of 21 acres or thereabonts, including canal basin, marl pit, cottage and garden, and watercourse; nearly the whole of it is situate within the Borough, a small portion, less than one acre, being in the parish of Pelsall."

The report proceeds to explain the system of purification proposed,—namely, subsidence in tanks and filtration through closely underdrained land. It also points out why this is advocated,—namely, because broad irrigation would necessitate taking more land than can be obtained in the neighbourhood, and because chemical treatment is both uncertain and expensive. It then proceeds,—"The proposed outfall sewers, designed for this district, are at such a level that the sewage from all the existing sewers will be intercepted thereby, at the same time affording ample facilities for intercepting the sewage from those places stil unsewered. Special care has been taken in choosing the line of these sewers, to secure good gradients for all the sewers without deep cuttings, thereby reducing to a minimum the first cost and future maintenance. The outfall sewers are designed to contour the lands through which they pass, and it is proposed to construct outlets at suitable points, to enable the intervening lands to be irrigated, if and when required. The scheme provides for three outfall sewers for the Walsall district, viz.—1st. The main outfall sewer, now in course of construction, to receive the sewage from a population of about 34,500, and low enough to drain the lowest house in the borough. Another outfall sewer, commencing at the end of the existing sewer in the road to Palfrey to receive the sewage from a population of about 2,000, and low enough to drain all the houses that may hereafter be erected on the Palfrey side of the town. A third outfall sewer from Ablewell-street, to consist of iron pipes laid to a hydraulic inclination of 1 in 592, to receive the sewage from a population of 11,000. The combined delivering capacity of these sewers will be equal to 14,525,000 gallons per day, so that ample provision is made for a large increase in population. There will be two outfall sewers for the Bloxwich district. The scheme provides for sewering all the declared streets where sewers are necessary, and the cost is included in the estimates. The length of sewers required in the Walsall district being 200 lineal yards, 9 in. diameter; 2,477 lineal yards, 12 in. diameter; 2,755 lineal yards, 15 in. diameter; and 882 lineal yards, 18 in. diameter. The length of sewers necessary in the Bloxwich district being 832 lineal yards, 9 in. diameter; 3,167 lineal yards, 12 in. diameter; 2,323 lineal yards, 15 in. diameter; and 366 lineal yards, 18 in. diameter." A summary of the estimates is also given, and shows the probable cost to be,—Walsall and Bloxwich districts: Land, including cost of provisional order, arbitration, and other legal charges, under-draining, preparing surface, levelling, making carriers, and engineering tanks, main carriers, engine-house, turbine, pumps, pipes and alteration to brook course, 51,380*l.* 4s. 1d. Outfall sewers,—Walsall district, 11,360*l.* 0s. 3d.; Bloxwich district, 3,297*l.* 1s.; total, 14,657*l.* 1s. 3d. Branch or street sewers,—Walsall district, 2,852*l.* 11s.; Bloxwich district, 2,724*l.* 0s. 5d.; total, 5,576*l.* 11s. 5d. Add 10 per cent. for contingencies, 7,161*l.* 7s. 8d.; total 78,775*l.* 4s. 5d. To this the scheme adds,—"The annual working expenses in utilising and purifying the sewage on the proposed farms will, in my opinion, be more than repaid by the crops and other produce; I do not, therefore, charge the scheme with any expense in manipulating the sewage;" and then proceeds to give the following estimate of the annual cost, viz.:—"To repay principal and interest on loans for the land and works necessary for the purification of the sewage,—viz., on land at 4 per cent. per annum, extended over a period of fifty years, and on works and other charges at 4 per cent., extended over a period of thirty years, will require an annual instalment of 2,540*l.* 6s. 8d. Outfall and branch sewers, total estimated cost, 20,233*l.* 12s. 8d.; to repay principal and interest at 4 per cent. per annum on a loan of 20,244*l.*, in thirty years, will require an annual instalment of 1,170*l.* 0s. 7d. Total annual cost of purification and collection, 3,710*l.* 7s. 3d. To repay principal and interest on a loan of 7,161*l.*, in thirty years at 4 per cent., will require an annual instalment of 414*l.* 2s. 6d. Annual cost of maintenance of sewers, pumps, pipes, &c., 200*l.* Total annual cost, 4,324*l.* 9s. 9d." The scheme is designed of sufficient capacity for a population of 100,000, so that no further sewers will be necessary for some time.

The Town Council resolved to adopt and carry out the scheme.

No. 42, OLD BROAD-STREET.

THE premises, No. 42, Old Broad-street, recently in the occupation of the London and Provincial Bank of Ireland, are in course of demolition, the business of the bank having been removed to premises in Throgmorton Avenue. The house is not of any great interest in point of art or age, but is a fair type of a London merchant's house of 100 years ago, and as these houses are gradually disappearing from the City to make way for structures better adapted to the wants of the age it may not be superfluous to record its destruction.

"In June, 1780," said Sir Charles Reed the other day, in the course of a speech in which he contrasted the present condition of the metropolis with its condition a century ago, "London was in the hands of a fierce and lawless mob; incendiary fires were burning in every direction, the trained band were called out, the military were quartered in St. Paul's Cathedral, the Lord Mayor was summoned to the Privy Council, and on the Mansion House was posted a royal proclamation in the following words:—'That the outrages committed by bands of desperate and abandoned men in various parts of this metropolis have so far overborne all civil authority . . . . that I feel myself obliged by every duty and affection for my people to suppress in every part those rebellious insurrections . . . . by the application of the force entrusted to me by Parliament.'"

These "rebellious insurrections" were afterwards known as the Gordon riots. Broad-street was the scene of an encounter between the trained bands, or City Volunteers, and the people, in which some five or six of the latter were killed and others taken prisoners, by which, as a contemporary account states, "the first damp was struck into the spirit of outrage."

The house No. 42, Broad-street, is shown on the left of the picture of the Riot in Broad-street on the 7th of June, 1780, painted by Francis Wheatley, of which an engraving was published by Messrs. Boydell, dedicated to the London Light Horse Volunteers and Military Foot Association, which associations appear to have distinguished themselves by their efforts to subdue the rising, and were publicly thanked by the City authorities for their exertions.

From this plate the house appears to have undergone but little change during the last hundred years, the only alteration perceptible being the covering the whole of the brickwork with cement, and the removal of the two lamps which formerly stood on each side of the entrance doorway.

The house was in all probability originally an inn, with the sign of the White Horse. In old maps a narrow alley is show in the rear of the house called White Horse-place. Union-court, which adjoins the house on the south, was formerly called White Horse-yard, and this name was in all likelihood changed to its present title after the Act of Union of 1800.

From the Pyrenees.—Dr. Phené writes us that in making a survey of the mountain d'Espiaup, near the Spanish frontier, in the Pyrenees, he found circles and ovals formed of stone, like those on Dartmoor, and both straight and curved avenues. He has also witnessed the ceremony of the fires of St. John, on the eve of his festival. The fires are lighted by the clergy while a service is chanted, and after the burning the charred wood is distributed to every household, and kept religiously all the year, as was the custom in Britain before the Christian era. At one of those fires, at Luchon, living serpents are burned in the flames. He is at present making an examination of the antiquities in the Balearic Islands, for a comparison of the Talayots of Minorca with those of Malta, and with the similar structure found by him in Brittany.

RESUSCITATION OF OLD ART.

THE practice of architecture in modern times has been so different from that which prevailed in the periods of Mediæval and Classical art, and a comparison of results is so little favourable to the present system, that it is perhaps worth while to inquire whether it may not be possible to revert to the old method of procedure, or, at least, to adapt it to the circumstances of our own day, especially as we are just now,—as regards style or mere fashion,—in a rather uncertain and transitional state.

Looking back into the earlier centuries of the architectural world, we see that "there were giants in those days;" while a glance at the last few hundred years forces from us the melancholy confession that in them there were but pigmies. If we ask ourselves what really noble edifice,—what great original work,—has been accomplished in modern times, we stand abashed at the answer, "None." If a really original edifice exists, which competent judges would venture to say is equal in merit to some well-known ancient structure, it must be altogether an exceptional example. The Houses of Parliament are very magnificent, but they are so only from the profusion of forms and details borrowed from fifteenth-century remains, but which are not at all of the nineteenth. They are honourable to the skill of their designer, considering the time and circumstances of their erection; creditable if we admit that mere resuscitation is the proper work of a modern architect. But resuscitation of the dry bones of antiquity was not the principle that produced the great work of Classical or Mediæval times. On the contrary, the old was constantly destroyed to make way for the new. The improvement and perfection of one style was the rule, however long it took. The Greeks, with a mental perfection which the world can no longer match, required at least four centuries to bring a single style to perfection. It was only by almost innumerable, and most gradual changes, that they eventually produced that perfect example of architecture,—the Parthenon at Athens. The Byzantines and Arabs also adopted a single style, and produced great and beautiful architectural work. In the West of Europe, in the Middle Ages, the same method was pursued, and each progressive step in the gradual development of style was an illustration to a page of history. Thus, in ancient times the results were perfectly satisfactory. The vital principle of originality was everywhere at work, and noble buildings rose in all countries.

What, then, is the cause of the difference? How is it that in modern times there is an absence of all originality of all power to design a really noble edifice that is not evidently more or less a copy of some other building or its details, more or less a mere adaptation,—in fact, a lithic plagiarism? Have the religious, political, and social circumstances of recent generations eradicated the power of original conception and design, or have we, as architects, been at fault in our mode of working in our architectural practice?

The facts above stated, and a little consideration of our ways and doings in these days, points to the latter as the cause of modern architectural failures. Whether from vanity, or the desire to attract public attention, or the eagerness to grow suddenly rich,—from whatever cause,—there is a restless working in numerous styles, the very principles of some of which are as opposite as the poles asunder. Since the time of Elizabeth there have been nearly a dozen changes of style, and now we have again the Anneite fashion,—a new birth of an older Renaissance. Elizabethan, Jacobean, Revolutionary, Queen Anne, Greek, Gothic, Italian, Renaissance, have followed one another in rapid succession during 300 years. Deducting 100 years for the Hanoverian period and 100 for revolutionary Cromwellian and Interregnum periods, when, strictly speaking, there was no architecture, we have a little period of twelve years or so for each fashion against the 400 which the Hellenic architects required to perfect one.

To come to our own day. In the present exhibition at the Royal Academy the designs for modern buildings range in style from the period of the Plantagenets to that of the Hanoverians. Of course, there is a great cleverness and much beauty in the designs, but scarcely such as to make the reflective observer happy, for he cannot help asking himself, "Shall we ever do anything really original at all equal to the work of the great ages of art if we continue our present method of *dilettanti* copying this, that, and other styles for mere fashion's sake, and our present mere antiquarian draughtsmanship, which are alike unworthy of the true architect and of any national encouragement?" Quite as rational would it be for a fashionable man to don a Tudor or even Georgian suit, and appear to-day in it in Kensington-gardens or Regent-street, but his friends would probably question his sanity, although the dress of those periods,—from an art point of view,—was more beautiful than that worn by men of the present day.

Let us hope, then, if there be any truth in these remarks, that the Council of the Institute or the next conference may initiate for us, or help us to initiate, some better principle of architectural practice by which the efforts of all shall be concentrated upon one style that may be decided to be the best suited to national and social requirements. By this means,—as like causes produce like effects,—there may be not only such a thing in the future as an Anglican style, but national buildings that may fairly and favourably be compared with the architectural *chefs-d'œuvre* of past ages. As Mr. Fergusson tells us that we are of a race which produced some of the wonders of ancient architecture, we must by nature possess the power to do great things in art, and we may, therefore, hope that the power only wants proper direction.

H. T.

THE TRUE CRITIC.

GIVE me the critic with a mind well stored,
A judgment balanced, and a heart sincere,
To pick my faults, and set me in the way
When I have miss'd the beautiful, the true;
Not some coarse blatant, with outpour of words,—
All foul extremes, that reek of prejudice,—
Whose reason lists from Truth's just equipose,
And dang'rous heels o'er to the depths of wrong:
Nor subtle flatt'rer, with a diction smooth,
Trimming to all, as changed occasion prompts,
Who fools the dullard into outward show,
To don fine airs but natural to the best,
Or weighs down genius with his fulsome praise,
With sense of shame to be bespatter'd so,
By one inconstant to the paths of truth.

Where artist fails the critic can but aid
To make that whole which else would seem a part,
A falling short of perfect excellence,—
Of excellence in work, in work still low,
Compared with that grand spiritcraft divine,
That excellence the critic cannot word,
The excellence that flows from deeper source,
The unseen schooling of the inmost soul.

METER.

OBITUARY.

Mr. John Guest, F.S.A., died suddenly at his residence at Rotherham, on Sunday last, while preparing to attend church. Mr. Guest was well known for his industry in historical researches. His latest work was "The History of Rotherham."

Mr. Edmund James Smith, C.E.—We regret to learn that Mr. E. J. Smith, C.E., died somewhat unexpectedly on Wednesday morning from the effects of an operation which he had undergone. His name has recently been prominently before the public as the principal witness before the House of Commons Select Committee on the Metropolitan Water Supply. He was a partner in the firm of Smiths & Gore, past-President of the Institution of Surveyors, member of the Northern Institute of Mining Engineers, Associate of the Institution of Civil Engineers, Crown Receiver for the Northern Counties, and surveyor to the Ecclesiastical Commissioners. After the prorogation of Parliament last year, Sir R. Cross, the then Home Secretary, entrusted to him the work of considering the matter of the water supply of London, and of negotiating with the water companies for the purchase of their undertakings.

Exeter Hall.—We understand that the committee for the altering of the hall for the purposes of the Young Men's Christian Association have requested Mr. A. Pite, Messrs. Searle, Son, & Hayes, and Mr. Charles Bell to submit designs and estimates for the same.

ARCHITECT AND CONTRACTOR.

A CORRESPONDENT writes as follows:—

"A has a contract for a large building, and has made a sub-contract with B to lay Portland cement concrete floor to the entire satisfaction of Mr. C., who happens to be the architect under whom A has to work. The work having to a certain extent proceeded, Mr. C. notices to A that it is a mixture of lime and cement B is putting down, and orders the work laid,—value over 300*l.*,—to be taken up. A sends a copy of this notice to B, and insists on breaking his contract. B asserts most positively that no lime whatever has been used, and offers to abide entirely by the arbitration of four of the best known architects. A declines to do this, relying on that condition of the contract that the work was subject to the satisfaction of Mr. C. alone.

Now, as a fact, none but the best cement was used,—no lime whatever. B's character is considerably damaged by the stoppage of the work. What remedy has B? We are told none against A, the terms of the contract being that the work was to be to the satisfaction of Mr. C. Please say if an architect can make a sweeping charge of this kind with impunity. B asked Mr. C. for an explanation, but he ignores B, simply acknowledging A in the matter. Your opinion is anxiously looked for by many contractors.

B, THE SUFFERER."

*** We can give but little satisfaction. It seems to us that B has no remedy against A, or the architect, unless some kind of fraud existed. The determination of a particular person has been made supreme, and those who have put him above them, and raised him to a *quasi*-judicial position, must for good or ill abide by his decision. At the same time, so much depends on the wording of the contract that, if all the facts were known, something more favourable to the sub-contractor might possibly be said. Proper advice should be taken. One practical point occurs to us, viz., what was the difference in the material relaid from that put down in the first instance,—though we are not quite sure from the letter whether the work was completed by some one other than B, which might materially affect the question. Thus the suggestion would occur, would an action for libel lie at the suit of B against C? To which, again, comes a counter suggestion. Possibly in that case the architect could plead that the communication was a privileged one. As to the first question, however, we feel no doubt; for the position of architects is so like that of a judge that one can give an opinion on broad principles subject to any special terms in contracts.

LION'S HEAD BY THE LATE SIR EDWIN LANDSEER.

ONE of the colossal lions' heads mentioned in our article on "Lions and Eagles," of May 29 (vol. xxxviii., p. 653), has been placed in the first large entrance-room of the South Kensington Museum. It is at present in plaster of Paris, but it is to be hoped that eventually, as we suggested before, it will be preserved in some more durable material, by being exactly copied by electro-deposit, in copper, so as to retain all the delicate touches of texture, on which, as in his paintings, so much of the felicity of effect of this great artist's work depends.

ACCIDENTS.

ON Saturday afternoon the roof and a portion of the wall of a stable situated at Pope's-hill, Shadwell, fell into the street with a crash. Four children, aged between three and six years, who were playing in the road at the time, were struck by the falling *débris*, and injured in a more or less serious manner. They were conveyed to the Children's Hospital, Shadwell. The building is stated to belong to what is known as the Shadwell Estate.

A lofty obelisk, which is in course of erection on Tower-hill, Beaumaris, as a public memorial to the late Sir Richard Bulkeley, formerly lord-lieutenant of Carnarvonshire, suddenly fell on Monday morning, a number of workmen having a very narrow escape. The monument, which was to have been formally unveiled next week, stood in a very exposed situation, and it is supposed that the recent heavy storms weakened its foundations.

THE NEW HALL OF THE SCOTTISH CORPORATION.

THIS interesting building, which was opened on Wednesday last by his Grace the Duke of Argyll, is thus described by its architect, Professor Donaldson:—

The New Scots' Hall, Crane-court, Fleet-street, London, has been erected in the years 1879-80, upon the site of the hall destroyed by fire on the 15th November, 1877. A building committee was appointed to confer with the architect of the corporation, as to the arrangements and accommodation of the new building. After much consideration it was determined to adopt a suggestion of Mr. Shand, member of the committee, that the new hall should be built on the space occupied by the old main building next Crane-court and by the four blocks of dwellings in Fleur-de-Lis-court, which had been burned down in the general conflagration. Three of these block were to be thrown into the main building, and one was to be left uncovered to afford an opening into Fleur-de-Lis-court from the northern court lying between the main building and the old chapel in Trinity Church-passage. This open space would thus afford light and air to Fleur-de-Lis-court and the premises of the Corporation,—an arrangement the more necessary for the health of the occupants in the Scots' Corporation premises, as the dwellings in the immediate vicinity are closely packed and densely occupied. Another part of this scheme was that the block of the old chapel, next Trinity Church-passage, should be left quite distinct from the new buildings, and available to be let or sold, as the Corporation might deem best.

The new block of buildings as carried out consists of three stories in height, the lowermost one being occupied by the entrance-hall from Crane-court, and by the principal staircase, as also by a back entrance for pensioners from the north court, with a secondary staircase for them. There is a spacious chapel, having 1,450 ft. superficial, and a height of 17 ft. for the congregation of pensioners on pay-days, and the religious service on that occasion. There are also convenient easements for the pensioners in attendance. The first floor contains the principal feature of the building; that is, the hall for the annual and other meetings of the governors, and for the transaction of the public business of the corporation. It has a northern aspect, and is 43 ft. 9 in. long by 18 ft. wide and 16 ft. high in the clear. It is well lighted, with a central bay-window and two large windows on the north side. At the east end of the hall is the fireplace, with a handsome white marble chimney-piece, resembling that at Craigievar Castle, Scotland (illustrated by Billings in his "Baronial Buildings"), with granite columns on each side, and surmounted by a large coat of the Royal arms, as at Craigievar, here heraldically emblasoned. It is of stone, and was saved from the unhappy conflagration of 1877, and, consequently, is a precious relic of the past. Over these arms are two panels, containing the shields of his Royal Highness the Prince of Wales and Duke of Rothsay, president of the corporation; and of his Royal Highness the Duke of Edinburgh, quartered with the arms of their Royal and Imperial Princesses, so as to produce a pleasing variety in the two panels, and at the same time a compliment to the two illustrious princesses. It is proposed to fill in twenty-nine like panels, which run along the three sides of the hall, immediately under the ceiling, with shields of the Scottish nobility, or chieftains of clans and representatives of historical Scottish families, who may be disposed to contribute their armorial bearings. So natural a series would keep alive the traditional spirit of feudal brotherhood, a leading and attractive feature of the Scottish character. This would to a degree, and for the present, serve to replace the picture of Mary Queen of Scots, a portrait of his Majesty King William IV., by Wilkie, and various other paintings which decorated the old hall, but were destroyed by the fire.

Adjoining the hall is the committee-room, about 19 ft. long by 15 ft. 6 in. wide, and a clerk's office, about 23 ft. long by an average width of 14 ft., which two rooms and hall, with the principal and pensioners' staircases, occupy the whole area of the first floor. The story above has a private room for the secretary of the corporation, and nine other residential apartments for the two under-officers (visitor and collector and the beadle), with their several conveniences attached, and they are well lighted and airy.

The architect has sought to infuse into the building as much as possible of the national sentiment. He has therefore largely adopted in the ornamental details the lion rampant, the thistle, and similar emblems; and, in the architectural arrangement, the high-pitched roof and small turrets to the front, and such-like features of Scottish architecture.

The Building Committee have proceeded with the greatest economy in the erection of the new building, consistent with its purpose and as a representative establishment.

The Corporation had to receive 3,768*l.* from the insurance company; and proceeded to receive tenders from well-known builders for the main erection, the lowest one being for 5,778*l.*, from Mr. Hobson, of Duke-street, Adelphi, whose work has been carried out very satisfactorily.

There have been executed other additional works, which, with professional charges, furniture, and other disbursements, will altogether exceed the funds immediately applicable to building purposes by a large balance of 5,000*l.*, which must be raised by special donations from the friends of the Corporation and of the Scottish poor, in order not to cripple the funds appropriated to their relief.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AT a special general meeting on Monday last (Mr. John Whichcord, F.S.A., president, in the chair), held in accordance with By-laws LXIV. and LXXI., to authorise the sale of 2,300*l.* Three per Cent. Consols, for the purpose of discharging the remaining liabilities in respect to the recent premises alterations, and of reimbursing to the ordinary funds a portion of the advances made therefrom, the discussion was opened by the President, and continued by Mr. Henry Currey, member of council; Mr. Joseph Jennings, Fellow; Mr. R. W. Edis, F.S.A., Fellow; Mr. Arthur Cates, member of council; Mr. T. Roger Smith, Fellow; Mr. David Brandon, F.S.A., member of council; Mr. Wyatt Papworth, Fellow; Mr. Octavius Hansard, member of council; Mr. E. R. Robson, F.S.A., Fellow; Mr. Charles Fowler, Fellow; and the President. It was ultimately resolved:—

"That the council be authorised to instruct the honorary treasurer to sell 2,300*l.* Three per Cent. Consols, for the purpose of discharging the remaining liabilities in respect to the recent premises alterations, and of reimbursing to the ordinary fund a portion of the advances made therefrom."

Donations to the Premises Improvement Fund amounting to 32*l.* 6*s.* were announced.

ARRANGEMENTS FOR NEXT SESSION.

The Council announce that a trial will be made, during the next session, of the following arrangements, namely:—

(1.) *Ordinary and other Meetings of the Session.*—*a.* That the prescribed number of meetings be, as at present, fourteen. *b.* That the said fourteen meetings consist, as at present, of one annual, one special (for the award of prizes), and twelve ordinary. *c.* That four of the twelve ordinary meetings be devoted to business, as follows:—One to be the opening meeting on the first Monday in November; another to be the closing meeting in May, when the Gold Medal is presented; the two others, if not required for adjourned discussions, to be convened principally for the discussions of professional questions and the interchange of opinion on matters of practice, as well as on current topics not open for criticism at other ordinary meetings and referred to in By-law LXIX. *d.* That the remaining eight ordinary meetings be devoted exclusively to the reading of papers and discussions thereon.

(2.) *The Preliminary Business.*—*e.* That the ballot for new members be taken only at the four ordinary meetings for business, and that notice of the same be duly sent to each proposer of the several candidates requesting his presence. *f.* That the announcement of donations of all kinds to the library, the library fund, and to other funds, be made only at the four ordinary meetings for business. *g.* That new members be admitted by the chairman at any meeting during the session. *h.* That nominations of candidates for membership be read at such meetings only as will conform with the terms of By-law XV., whereby a recommendation must be read at one ordinary meeting, hung up during that and the two successive ordinary meetings, at the latter of which the candidate shall be balloted for. *i.* That in announcing the nominations the name and address of the candidate shall alone be read,—the nomination paper to be immediately afterwards hung on the board in the meeting-room. *k.* That, at the eight ordinary meetings for the reading of papers and discussions thereon, no questions other than relating to the subject of the evening be submitted.

(3.) *Papers and Discussions.*—*l.* That subjects for papers and discussions be invited under the following heads:—I. New materials, building appliances, and systems of construction. II. Architectural works in progress at home and abroad, the foreign papers to be translated for the authors if required. III. Fine art specially relating to architecture. IV. Archæology. V. Building and municipal legislation. VI. Sanitary science. . . . .

(4.) *Publication of Proceedings and Transactions.*—*o.* That the Journal of Proceedings be issued, as at present, on the Thursday following each meeting; and that an abstract of the papers and discussions be printed in that journal. Further, that the Presidential addresses at the opening meeting, the Gold Medal presentation, and on other occasions, be printed in full in that journal. *p.* That the volume of Transactions be issued annually to members; and that the volume of Transactions consist of accepted papers, philosophical, practical, or artistic, together with full discussions thereon. Also that the Presidential addresses be therein reprinted, together with an appendix containing the memoirs of deceased members, with such other matter as the Council may deem desirable. . . . .

The Council regret to announce that Mr. Thomas H. Wyatt, F.S.A., past-president, has retired, in consequence of ill-health, from the office of honorary secretary. In accepting Mr. Wyatt's resignation, the Council referred to those duties which, since February of last year, had been performed to the advantage of all his colleagues, and to the undoubted satisfaction of the general body of members, offering him at the same time a cordial expression of their thanks and a renewed assurance of their sincere regard. The election of Mr. Wyatt's successor will take place at the opening meeting of next session.

ARCHÆOLOGICAL SOCIETIES.

Norfolk.—The annual excursion of the Norfolk Archæological Society took place a few days ago to Woodton, Hedenham, Bedingham, Darrow Wood, Denton, Earsham, and Bungay. At Woodton Church some notes respecting the building, prepared by Mr. R. M. Phipson, architect, were read, in his absence, by the Rev. C. R. Manning, who supplemented them by observations of his own. There is no chancel arch, and the old, like the new, roof, ran through the nave and chancel. The walls of the church are almost entirely Early Decorated, and Mr. Manning puts their date at 1280-90. On the north side of the nave are two two-light Decorated windows. The south aisle is divided from the nave by four very plain Early Decorated arches and piers; the west pier being larger than the others,—a not very uncommon occurrence. Various and somewhat fanciful reasons have been given for this arrangement. The Decorated east window of the south aisle is one of the best in the county. It has wave mouldings and two sunk shafts, a very unusual head inside at the point of the arch, and a finial and two corbels outside. The chancel east window is of a Transition character, having a dog-tooth ornament in the jambs and arch, partly restored and injudiciously picked out in unsatisfactory colours. If relieved at all the colour should be much more subdued. There are remains of stairs to the rood-loft, and a rather rare two-light little opening into the church of Early Decorated work, or transition from Early English. The position of the rood-beam must have been peculiar, as it terminated over the point of the easternmost bay of the south aisle. One of those curious architectural contrivances, a squint, enabled the priest in the chancel to see into the chapel at the end of the south aisle. In the chancel is an Early Decorated piscina of rather uncommon design, a plain sedile, and beneath the east window a double aumbry or locker. The font is Early English, if not late Norman, as it has a Norman arcade of Purbeck marble. The smaller shafts are modern. The tower is of the eleventh century, with the exception of the octagon top story, added three or four centuries later. On the outside of the north wall, near the north porch, is an early arch, supposed to be the recess for the founder's tomb. At Hedenham the excursionists visited the restored Church of St. Peter, of which, according to Mr. Phipson, "the good old interesting work seems to have been restored off the face of the earth,—another case of over-zealous and mistaken restoration." The building consists of a nave, chancel, and square west tower, the latter in three stages without buttresses, and appears to be of the Early Perpendicular style. The walls of the nave are Early English, almost Transition. The nave has a plain oak roof of Decorated work, like the chancels of Howe and Mutford churches. Notwithstanding the slight tie in construction, these kind of roofs have stood well together for nearly 500 years. The font, plain Perpendicular, is said to have remained plastered over for 200 years, the plaster having been used to protect it from Puritanical demolition. At Bedingham Church, the lower part of the chancel walls is, according to Mr. Phipson's notes, Early Decorated, almost transition from Early English (about 1300). There is a good south priest's door, with dog-tooth mouldings, and a four-light large east window, with interesting tracery, without cusps, of the same date. A

Perpendicular clearstory of late date has been built over the original chancel walls, which were low. The north and south aisles are Decorated, with Perpendicular insertions, with a Transition doorway, from Early English to Decorated, preserved in the former. At the east and west ends of the north aisle are Early Decorated windows, which, like the doorway, Mr. Phipson believes, are not *in situ*. The circular west tower of the thirteenth century has an octagon top of later date. The Perpendicular font is enriched with carved emblems of the evangelists; but one peculiarity is that St. Matthew is represented holding a guitar instead of a scroll. The most striking object in the church is the Perpendicular rood-screen, which has been well preserved. There are no figures upon the panels. There is piscina and a sedilia in the chancel, and also a quaint piscina in the chapel of the aisle. On the way to Denton the carriages were pulled up by the side of some fields, and the party were obligingly led by a farmer of the old school to a lot of leased ground with a clump of trees on the top, known as Darrow Wood, and just visible from the highway. By traditions, this modest eminence is known in the village as the Castle-hill, with a small ridge beyond called Hangman's-hill. As the party approached the wood, which is in the middle of some pasture land, it was found to be a hill about 15 ft. high, and surrounded by a moat containing water nearly all round. The hill has a hollow in the centre. On one side, from the moat, there extend earthworks enclosing a considerable portion of land, and beyond that is the ridge called Hangman's-hill. This interesting spot,—of which no mention is made in any Norfolk history,—was visited thirty years ago by Mr. Greville Chester and by Mr. Rix. Mr. Alfred Suckling, in writing to the latter gentleman, suggested that it was Danish work, and served as a look-out in connexion with the Danish camp at Earsham. But, Mr. Manning now observed, it is clear not only that Mr. Suckling was mistaken, but that in these earthworks, partly hidden beneath the woods at Darrow, we have the site of the residence of a Saxon lord. In the hollow of the mound was his timber-built residence: perhaps the edge of the mound was palisaded; and over the moat was a drawbridge which gave access into the exterior enclosure, that was no doubt also palisaded, where the cattle were secured. It was suggested that the name, Hangman's-hill, given to the slight eminence beyond, may perpetuate the site where the lord executed justice; and Mr. Manning remarked that no doubt the Saxon lord had the right of hanging, and would have what would be called a gallows-hill. The society will no doubt respond to an expressed wish, and have a survey of the place made for publication in a future number of its Proceedings. On arriving at Denton, a very welcome break occurred in the day's proceedings, suggested by the hospitable feelings of the Rector of Denton, the Rev. C. A. St. J. Mildmay, who, with Mrs. Mildmay, most kindly received and entertained the visitors. The church of Denton, dedicated to the Virgin, is a grand Early Decorated building. The east window is of similar design to that at Bedingham, but is filled with stained glass, some of it of a very old date. Earsham Church having been visited, the party departed for Bungay, and an inspection of the ruins of Bungay castle brought the programme of the day to a close.

Derbyshire.—The members of the Derbyshire Archæological and Natural History Society recently had an excursion to Norbury and Ashbourn. At Norbury Church, Mr. J. C. Cox, author of the "Churches of Derbyshire," described the building and the fine altar-tombs in the chancel. The Manor House at Norbury, formerly the residence of the Fitzherberts, and now occupied by Mr. Maskery, was next visited. Here the ancient court-yard, the quaint old panelling, and the interesting cartouches of stained glass still preserved in the windows, were inspected with much interest. After luncheon the Grammar-school at Ashbourn was visited, and here Mr. J. Sleigh, J.P., read a paper on "Old Ashbourn Families." The party then proceeded to Ashbourn Hall, where the rest of the day was spent.

Honour to the Craft.—The successful competitor for the Queen's Prize at Wimbledon this year, Mr. Ferguson, is a stonemason, from Argyllshire. What winning this prize means is only understood by those who have tried at it.

FEES UNDER METROPOLITAN BUILDING ACT.

FLATS.

AT Westminster Police-court Messrs. Perry & Co., builders, of Tredegar Works, Bow, appeared to an adjourned summons, at the instance of Mr. Edward Drury, the district surveyor of St. Margaret and St. John and the Close of St. Peter, Westminster, to show cause why they should not pay the sum of 108*l.* 2s. 6d., fees which had accrued by reason of Mr. Drury surveying and causing the regulations of the 18th and 19th Victoria, chapter 122, section 51, second schedule, to be carried out with regard to the works known as Queen's Mansions East, Victoria-street, Westminster, not yet finished. Mr. Drury conducted his own case, and Mr. Greenwood defended.

Mr. Drury relied firstly on the 27th section, sub-section 2, and contended that the blocks known as A, B, C, D, E, F, and G were separate buildings, and as such were entitled to be charged for. In January, 1879, he received notice from Messrs. Perry that the building in course of erection was intended to be used as residential chambers of an area of 10,300 ft. He drew attention to sub-section 2 by letter, and on the 22nd January notices were received that Perry & Co. would erect three blocks of buildings. Notice was then sent that there were no continuous party walls, and attention was drawn to the section relating to this. After communicating with Mr. Knowles, the surveyor, and seeing him, the defendants were written to asking for separate notices, and on the 17th of July a Mr. Bartlett called, the notices were filled up, and they were signed, for four sets of chambers on the basement and seven each on the ground and next five floors. Mr. Drury had constantly surveyed the buildings, which were advertised as residential chambers in sets, and were so constructed as to be occupied by separate tenants, and consequently the claim for 108*l.* 2s. 6d. was made up of fees under the Act for separate buildings.

Mr. Greenwood, for the defence, contended that in signing these notices his clients had no idea that this building was going to be considered separate buildings. They were really given in mistake for the original plans, and the intention was that it should be an hotel.

In answer to Mr. D'Eyncourt, Mr. Drury stated that the fee for an hotel would be 10*l.*, payable a month after the roof was on. There was communication from set to set only by a balcony. These notices were good, and they were really separate tenements.

Mr. Greenwood objected to the claim for the basement, 10*l.* 15s., as they took it of another builder, and it should be charged to him.

In the end Mr. D'Eyncourt came to the conclusion that the fees were due as claimed, and ordered them to be paid.

A CONTRACTOR'S CLAIM.

WILLAN *v.* THE MAYOR OF ROCHDALE.

THIS was an action (tried at the recent Manchester Summer Assizes before Mr. Justice Lindley) brought against the Corporation of Rochdale, to recover 143*l.*, the balance of a contract for the construction of a sewer.

Mr. Ambrose, Q.C., in opening the case, said the plaintiff was a contractor, living at Chorlton-upon-Medlock, and his claim arose upon a contract which he had accepted to make a sewer, and the larger portion of his claim had been practically admitted in a letter he had received from the corporation surveyor; but a counter claim had been set up by the corporation on account of a claim which they had most absurdly paid for damages alleged to have been done to certain houses by the excavations for the sewer. He contended, however, that not only was the plaintiff in no way liable for the alleged damage, but neither were the corporation liable.

On behalf of the defendants it was contended that the damages to the houses arose from the negligence of the contractor.

His Lordship said that being the case he could not see how the corporation had been compelled to pay for the damages if they were due to the negligence of the contractor, and it appeared to him that they could not sustain the counter claim.

Mr. Potter, Q.C., for the defendant, applied to his Lordship to allow the action to stand over with leave to the defendants to amend.

His Lordship thought the only fair thing would be to decide against the corporation with regard to the counter claim without prejudice to a further action if they saw their way to it.

After a long discussion with regard to two accounts of minor importance, a verdict was entered for the plaintiff for the amount claimed, with liberty for the defendants to bring an action, if so advised, for 132*l.*, the amount which the corporation had paid on account of damages alleged to have been caused by the negligent construction of the sewer.

HOUSE PROPERTY.

ON Monday Messrs. Mallett, Booker, & Co. offered three valuable West End residences for sale, at the Auction Mart, Tokenhouse-yard. The first property submitted was the large freehold mansion, No. 15, Lancaster-gate, close to Kensington-gardens and Hyde Park, described as a handsome building of imposing elevation, containing five floors and basement, together with a range of spacious stabling and coach-house. The mansion was stated to be built on arches, with iron girders, and let on lease for twenty-one years at a rent of 330*l.* per annum, the present estimated value being 400*l.* The property was sold for 7,020*l.*, [the purchaser being stated to be the present occupier.

SHIPBUILDING AND ENGINEERING PROPERTY AT MILLWALL AND CUBITT TOWN.

THREE large business properties on the banks of the Thames, at Millwall and Cubitt Town, connected with shipbuilding and engineering, which have now been unoccupied and idle for some few years past, were offered for sale at the Auction Mart, on Monday last, at upset prices, upwards of one-third less than their original cost and present estimated value, without meeting with an offer for any one of the three. The auctioneer was Mr. Bradshaw Brown. Thus, for property offered for an aggregate sum of 39,500*l.*, but estimated to be worth 79,330*l.*, no purchaser could be found.

STATUES.

Lord Lawrence.—It is stated that the executive committee for this object have determined to erect a standing statue in bronze in the open air, and to give Mr. Boehm the commission for the work. No site has as yet been fixed on, but it is desired, if possible, to obtain the unoccupied corner of Waterloo-place.

Robert Raikes.—The model of a group of statuary to the memory of Robert Raikes has been unveiled at Gloucester in connexion with the Sunday School Centenary. The group consists of two figures,—Robert Raikes, 8 ft. 4 in. in height, and a little child who is nestled close to his side, and over whom he has thrown his right arm with an air of protecting kindness. The attitude of Raikes is very striking. He is standing on the left leg, with the right advanced; with his left hand he holds a Bible closely pressed to his heart. The face is open, and beaming with the love and kindness which were so eminently characteristic of the man. The sculptors are Messrs. W. & T. Wills, of London. The marble group is to be placed in the cathedral when the necessary funds,—1,000*l.*,—are raised by public subscription.

Daniel O'Connell.—On Saturday last a special meeting of the O'Connell Monument Committee was held in the Mansion House, Dublin. The chair was occupied by the Right Hon. E. Dwyer Gray, M.P., Lord Mayor, who said he had called the meeting because it appeared to him there was a very strong public feeling that the base of the monument, as it at present stood, was too wide. Memorials to that effect to the Corporation had been prepared, and the feeling was that the base at present was, more or less, an obstruction. He had, under these circumstances written a letter to Mr. Brock, asking him would it be practicable to reduce the size of the base without injuring the appearance of the monument? The following was the answer he had received from Mr. Brock:—

My dear Lord Mayor,—If it is deemed important to secure a greater space for the thoroughfare around the O'Connell monument, the base may, I think, be reduced by 8 ft. without serious detriment to the appearance of the monument. This would bring the extreme width down to 32 ft. I propose to obtain the reduction by taking the steps up entirely, dispensing with the lower one altogether, and setting the two remaining ones back 4 ft. all round. Anything more than this could not be done without completely spoiling the general effect.—I am, my dear Lord Mayor, yours, &c., JAMES BROCK.

It was resolved to apply for the consent of the Corporation to the proposed alteration.

Sewage Purification at Paris.—As the city of Paris has tried various chemical and other means of dealing with sewage, and is now irrigating about 1,000 acres of land within five miles of the Tuileries, the following from the *République Française* will be of interest:—"On June 23rd last, the Municipal Council of Paris resolved, among other things, 'To approve, firstly, the continuation of irrigation in the fields of Gennevilliers, and the carrying of the sewage to the lower north-western part of the peninsula of St. Germain and adjoining farms, and the delivery of sewage from the conduits to persons on their routes, who shall be willing, by agricultural, chemical, or other means, to cleanse it, at their own expense and risk, for the sake of what they may be able to get out of it, subject to rules to be prepared; secondly, to ask the Government, in case the 1,500 hectares (3,700 acres) might be insufficient for the purification of the sewage without annoyance to the neighbourhood, to take into immediate consideration the extension of the present proposal and the irrigation of other districts in the valley of the Seine.'"

EMPLOYERS' LIABILITY BILL.

STRONG objections are raised by the master builders of the United Kingdom to Sub-clause 3 of Clause 1 of the Employers' Liability Bill, as the one which entails the greatest hardship upon employers, and especially those engaged in the building trade. They urge, and with justice,—

"That in the business of a builder a very large proportion of the persons employed throughout the various departments comprised in such business are persons who are of necessity in a position of some authority. The general foreman exercises authority over the other foremen, and these again exercise authority over those beneath them, and so on in a descending scale, until at last the person exercising authority is often a workman, and a workman in a comparatively humble grade: thus each bricklayer has working with him a labourer, who is expected to conform to the directions of such bricklayer, and the effect of Sub-clause 3 will therefore be not only to render the employer liable for the negligent acts of his general foreman, and his other foremen, but also for the negligent acts of all his bricklayers whereby the labourers working with such bricklayers sustain injury.

That the above case of the bricklayer and labourer is given simply by way of illustration, but in a large building business the persons who exercise authority such as the bricklayers may be counted by hundreds, and yet each of such persons will, by reason of Sub-clause 3, be in a position to render his employer liable to the payment of heavy damages."

It appeared, from the observations of the Right Hon. John George Dodson, made on moving the second reading of the Bill, that the object and scope of the Bill was only to render the employer liable for the acts of a person "to whom the employer distinctly delegates his own authority." The Sub-clause 3, however, as above pointed out, goes much further, and neutralises the effect of the definition clause, which limits the liability of employers to cases of negligence of persons who are not ordinarily engaged in manual labour, and thereby (so far at least as builders are concerned), almost abolishes the defence of common employment.

It is to be hoped, therefore, that Sub-clause 3 may be omitted from the Bill.

BUILDERS' TENDERS.

SIR,—"London Builder" is to be commended for having drawn attention to the forms of tender which almost invariably accompany bills of quantities. Clearly the intention of those who issue them is to obtain an undue advantage either in regard to any error that may have occurred in calculation, or through the conditions of contract.

Many builders have, I believe, protested against these forms by sending in tenders so worded as to avoid legal binding, such as,—"I estimate cost as per plans, &c., and subject to my approval of contract conditions, at the sum of—" but in this,—ignoring the architects' form,—they generally risk the non-reception of their tender, and consequent loss of time and money. The injustice of the proceeding is great, and calls for a remedy.

There is, I believe, a Builders' Association; but very little is heard of any practical work being achieved by that body. Much might be gained by mutual agreement in regard to this and other matters detrimental to the trade.

I would refer it to the consideration of the before-mentioned Association.

DELTA.

A CURIOSITY IN THE BUILDING LINE.

A "SUREFOOT HOUSE."

FORTY years' experience in building, and a perusal of the usual works of reference, had, I thought, entitled me to consider that I pretty well knew all the various systems of building, especially in this neighbourhood (Taunton); but a few days since when at Othery, near the site of the castle of Sedgmoor, in Somerset, I was shown something quite new to me, and, I think, to most of the readers of works on building. It is known by the above name, a "surefoot house," and the term is well applied. It will be generally admitted that the destruction of most old houses is caused by the spreading of the roof forcing the walls out of the perpendicular. When the walls are of "cob," or mud, it is bad enough; but when erected of sandy deposit from a river, and the roof formed of heavy green unseasoned timber, covered with wet reeds or rushes, the poor walls have but a small chance. Now, in this neighbourhood, when it was wished to erect a house that should stand against the evils mentioned, it was the custom to first select crooked trees, which were cut down the centre, and then planted in the ground, say 20 ft. apart, with their tops touching each other at the ridge, and forming (when the joists were in) a figure something like the letter A with its lower ends buried in masonry to form the "surefoot," which could not move or spread. When several of these frames were erected in a line the "side timbers" were laid on the upper part of them, then the rafters, and finally covered with such reeds, rushes, or peelings as could be procured. The spaces below and between were then filled up with mud, cob, or sand; leaving openings for doors and windows, and a firm and durable house was formed, cool in summer, warm in winter, and in time dry and tolerably healthy. The exteriors were plastered down and lime-washed, shrubs planted, and ready for occupation.

EDWARD JEBOULT.

BRITISH MUSEUM LIBRARY.

SIR,—The remarks "C. C." makes in reference to publishers sending to the British Museum Library only what books they choose, and the time current numbers of periodicals are kept from the reader (usually said to be "at the binder's") are certainly well timed, for several times I have been unsuccessful in my quest after books. These, at the time, I made a note of, but unfortunately cannot lay my hand on it at present. One I distinctly remember,—requiring a certain number of the *Journal of Anatomy*, for 1878, I was handed vol. xiv., part 1, October, 1879, and courteously told that was the only number of the journal they had in the library. Another time I looked in vain for a now defunct journal, one that had some little existence previously to 1850, and we are made to believe every printed scrap, in the shape of a book or pamphlet, is to be found in this national library. Surely if there be not room at present to warrant calling for any stop to printed matter, the Treasury should be called upon to give additional room.

H. C. STANDAGE.

PROVINCIAL NEWS.

Hull.—On the 16th inst. the new stalls which have been erected in the market-place by the Corporation were used for the first time. From within the memory of the oldest inhabitant the old dilapidated wooden stalls, with the concomitants of refuse and filth which accumulated in the principal thoroughfares each market-day, have been associated with the market-place; but now all is changed. The market-place has been thoroughly purged of the old structures, and in their places a neat iron frame-work, with suitable coverings, has been erected in continuous lengths on the south and north church sides, and in the open space at the west end of the parish church.

Ripon.—Several street improvements are about to be effected in this city. These improvements, together with the operations which have just been commenced for the widening of North Bride, when completed, will confer considerable advantages upon the city.

Birmingham.—The fountain which occupies a considerable space in the centre of the Birmingham Market Hall has been removed, in accordance with a resolution of the Town Council. The fountain has been presented by the Markets and Fairs Committee to the Baths and Parks Committee, and the latter having decided to place it in Highgate Park, a number of men have been engaged, under the superintendence of Mr. Alfred Rodway and Mr. Hearn, in preparing the site, which is in the centre of the large grass plot lying between the terrace and the children's playground. The fountain will undoubtedly prove an additional ornament to this place of public resort.

Liverpool.—The Liverpool Town Council have, on the recommendation of the Markets Committee, accepted the tender of Mr. James Cheetham for altering the Roe-street end of St. John's Market to the improvement line, in accordance with the plans and specifications of the borough surveyor, amounting to 5,297*l.*

Manchester.—Proposals are made, in connexion with a movement for providing public entertainments in Manchester, for the erection of a room in a central position, of convenient size, and suitable for concerts, balls, bazaars, banquets, public meetings, dramatic performances, and public entertainments generally. A suitable plot of land, consisting of some 900 square yards, has been selected, situated in one of the principal thoroughfares of the city, which may be obtained at 12*l.* per yard. It is proposed to erect a building containing a hall capable of holding, according to requirements, from 800 to 1,200 persons. The hall will be so constructed as to be convertible into a small theatre when required, and have every accommodation in the way of waiting and dressing rooms. A design has been submitted, the estimate for which would be about 10,000*l.* It may be mentioned that the ground floor would include several shops.

Langport.—On the 3rd inst. that portion of the new cemetery which is intended for the burial of persons connected with the Established Church was dedicated and consecrated by the Bishop of Bath and Wells. The site for the cemetery, which is about an acre and a half in extent, was given by Mr. J. Broadmead, of Langport. It is situated on the high road between Langport and Aller, and is equally divided between Churchmen and Nonconformists. A large and commodious chapel has been erected by Mr. Davis, builder, of Langport, from designs prepared by Mr. Hall, architect, London. The building is in the Early English style, and is divided in the centre by a screen. One side is set apart for the Established Church and Nonconformists, but both portions are fitted up almost similarly in every respect. The building is of white lias stone, with Ham stone dressings. The total cost is about 1,200*l.*

Penzance.—A new vicarage-house for St. Paul's, Penzance, has been undertaken. The building is to be erected on a vacant spot at the end of Clarence-place, given for the purpose by the Misses Jago. Plans have been prepared by Mr. John Trounson, in accordance with the requirements of the Ecclesiastical Commissioners, who will make a grant towards the work. The building will cost nearly 1,500*l.*

Warrington.—For some three or four years it has been known at Warrington that the Cheshire Lines Company had purchased a large plot of land in Marsh House-lane, and contemplated the erection of engine-works thereon. The erection has now been determined upon, and the contract for the building, amounting to some 15,000*l.*, has been let to Mr. Aaron Houghton, of Godley. The works will be of an extensive nature, and it is believed that in the end the company will make as well as repair their engines at Warrington. In addition to this building, the branch line which is intended to shorten the distance between Liverpool and Manchester, and for which powers were obtained some time ago, is about to be constructed. The new branch line will be but two miles and a half long, and will extend from the Sankey Viaduct across Little Sankey Fields, the top of Bewsey-road, on to Padgate. The line for the fast expresses will thus miss Warrington altogether, and will have an almost straight run from Liverpool to Manchester, instead of the curves which exist from Sankey Viaduct to Warrington Station on the present line. The new branch, which will cost a large sum of money, will save about five minutes in the journey between the two places, which will then be accomplished in forty instead of forty-five minutes. Mr. Robert Heaton, contractor, of Warrington, has obtained the contract for the construction of about one mile and a half of the new line, from the Sankey Viaduct to Folly-lane, Warrington, and the work will be commenced forthwith.

Books.

Classic and Italian Painting. By E. J. POYNTER, R.A., and PERCY R. HEAD. London: Sampson Low & Co. 1880.

THIS is one of the art text-books edited by Mr. Poynter, another of which, that by Mr. T. Roger Smith on architecture, we noticed the other day. In the present case, however, Mr. Poynter seems to have done more than merely edit, as he mentions in the preface that he has made considerable additions to Mr. Head's work, "especially to the accounts of the earlier schools where it was important to show the connexion between them, and the means by which art spread from one part of Italy to another." This has been particularly the case in regard to the lives of great artists of rather exceptional genius and position, such as Mantegna. The more familiar of the great names in the sixteenth century are not treated as corresponding length, because information about them is easily accessible, and their merits are already matter of almost popular knowledge.

The editor, in the preface to the book, comments on the impossibility of pretending to carry the learner far on so vast a subject, in a mere text-book of this limited size, which hardly admits of its being more than a compilation. But "the least," he thinks, "that the future possessor of a fine house or a picture-gallery can get from such studies will be an insight into his ignorance concerning many things

which surround him and meet his eye at every turn; and if his interest in them carry him but little further than the acquisition of a certain number of names and dates by heart, the mere fact that he has been taught these may be an indication to him of their importance; and thus his small store of acquired facts may add to his contemplation of pictures and buildings that respect which is always attached to matters learnt in youth, and perhaps teach him to gaze upon them with a less vacant eye." This is certainly not an exorbitant demand to make for the usefulness of the work. We hope it may do a little more than this; but it is pretty clear that Mr. Poynter has a very low idea of the average capacity of the Englishman to understand what painting means, and perhaps he is not without too good reason for his opinion.

The little that is known in regard to what Greek painting may have been is brought together in the second chapter of the book, and forms an interesting memorandum on this head which may be useful even to those who are already not ignorant of the subject. The first chapter deals with Egyptian painting, of which we know so much more, strangely enough, than of the doubtless far higher art of the Greek painters, and some of the peculiarities of the Egyptian method in painting are well illustrated. We cannot agree, however, in the supposition that the Egyptians, in their figure drawings, "combined profile and full view in a way which was no doubt intentional and systematic. Thus, for instance, though their faces are always drawn in profile, they represented the full face view of the eye." We opine that the eyes are drawn full just for the same reason that the face is drawn in profile: in either case it is the only way in which the feature can be represented by a draughtsman who is unable to foreshorten. Most children who try to draw a head do the same; they generally draw a profile head, and they then invariably put a full eye in it. The Egyptians were children as far as figure-drawing is concerned, and followed their instincts in the same way. The chapter on Egypt is, we observe, signed with the editor's initials; we must therefore conclude that this is his opinion, in regard to which, we may say, in Dugald Dalgetty's formula, "We trust he will permit us to be surprised."

In regard to a book going over such well-known subjects in a brief and popular manner it would be out of place to say many words; the book seems entirely to fulfil its intention as a popular introduction to the subject, and the characteristics and special position of each painter in regard to the history of art are clearly indicated. In the brief account of Michelangelo we must take exception to the statement that he "imparted to architecture a grandeur of style, founded on the study of proportion." This is about the last praise he deserves, his great architectural work being, in fact, spoiled exactly by the want of sense of proportion which destroys its scale. The chapter on Greek painting, before alluded to, contains a good deal which is applicable, and, perhaps, intended to be so, in a more general sense. Thus when we read in regard to Nicias, who insisted on the importance of choosing subjects worthy of the dignity of the art, that "this was a right and much-needed protest against the growing taste for petty trivialities which not long afterwards debased Greek art," and when we are told in the next paragraph how works of this latter trivial kind fetched great prices, "but high and serious art was unsaleable, although it was the fashion to profess much admiration and to give vast sums for works bearing the names of the great old masters," we feel pretty sure that any but the dullest reader will make a further application of the sentiment.

VARIORUM.

IN a pamphlet entitled "A New Proposal for providing Improved Dwellings for the Poor" (Skeffington & Son), Mr. Fras. Rivington, the writer of it, suggests the introduction of a *State Guarantee* for a moderate rate of annual interest upon a fixed amount of capital, to be supplied by public companies for the erection of suitable dwellings for the poor and industrial classes. ——To *Social Notes* for July, Mr. Cave Thomas contributes an illustrated notice of the late Rev. F. D. Maurice, which includes an interesting sketch of the foundation of the Working Men's College, Great Ormond-street. —— The July number of *Time* is bright and pleasant. The illustrations by Mr. Alfred Thompson have become an important feature of the magazine. *Time* jumped into a good circulation at starting, and worthily maintains it.—— The current number of the *Quarterly* includes an informing article on "Middlesex." The writer says,—"The first English inhabitants of the most populous of English counties in the present day were a handful of rude settlers dwelling far apart along the banks of the Thames, and still further apart in the valleys of the Brent or of the tributaries of the Lea. A few villages marked the course of the ancient roads; but there were no populous towns, no great market-places, no fortresses. Down to the time of the Norman Conquest, and much later, Middlesex remained but half cultivated, and a vast forest flourished over the face of the county. The land-springs of the heavy clays sent forth water-brooks in abundance, and the brooks nourished willows and hazels, oaks and beeches. Many of the names which survive tell us of this time. The North Haw and the South Haw were divided by the Coln. Acton is the town of the oak. Norwood and Ashford, Hounslow and Willesden, Southgate, Highgate, and a score of names besides, testify to the ancient condition of the county. There were, as there still are, high hills and lesser ones, but there was, and is, but little level ground. The undulating character of the surface of Middlesex cannot be better tested than by taking the levels along a line at a distance of about a mile from the river's bank. This is easily done by following the course of a great modern thoroughfare like Oxford-street. There is almost a straight line of roadway from Shepherd's-bush to the site of the old City wall at Newgate; but, in spite of the levelling process which the ground has suffered, there are not 100 yards of really flat ground along the whole route. At Shepherd's-bush we are only 21 ft. above the sea-level. Thence there is a gradual ascent to Plough-lane on the top of Notting-hill, which is 72 ft. higher. Orme-square is 34 ft. above the ornamental water in Kensington-gardens, whence the ground again rises, until, at Park-lane, a height of 92 ft. is reached."

Miscellanea.

The Competition Memorial.—*The American Architect* says:—"The *Builder* completes, in the last number received, its list of the signers of the memorial in regard to competitions, of which we have repeatedly had occasion to speak. It is rather a surprise to us to find so many of the most distinguished names in the profession among the signatures; not that we doubt their goodwill toward the cause, but because men of eminent position, and advanced in years, have usually formed a network of ties and habits about themselves which makes them cautious about putting their own hands to anything which may tend to change the traditions of their profession, even for the better. They may in private advocate reforms, but as a rule they prefer to leave the accomplishment of the end to the younger generation. It is, therefore, all the more gratifying to notice the active co-operation in the work of such men as Messrs. Blomfield, David Brandon, and James Brooks, Professor Donaldson, Messrs. R. W. Edis, Ernest George, Micklethwaite, Penrose, and Seddon, the two younger Scotts, Alfred Waterhouse, and many others of perhaps equal note. It is no idle form which all these architects subscribe, but an agreement which with some, especially the more distinguished, practically means a voluntary renunciation of the advantage which their well-earned reputation gives them in contests with their less eminent fellows, in favour of fair and open rivalry, in which the best shall win. That this is no trifling sacrifice, those who have witnessed the manner in which, with laymen, a great name overbears even distinguished merit in obscure competitors will readily understand, and the sincere gratitude and esteem of the profession are due to those who, out of love of fair play, and desire for the advancement of art, have been willing to make it."

Intended Establishment at Clent.—On the 22nd ult. the Clent Hills Hydropathic Establishment Company (Limited), was registered. Capital 50,000*l*. The directors propose to erect a building to accommodate about 150 visitors, and the architects, Messrs. Smith & Mackenzie, of Birmingham and Stourbridge, estimate the cost of the building at 36,000*l*. The directors intend to proceed to build at once, on a site near Hagley Hall, Lord Lyttelton's seat.

Underground Railway Completion.—Mr. O'Shaughnessy, the chairman of the Committee of the House of Commons, to which the Metropolitan and Metropolitan District Railway (City Lines and Extensions) Bill was referred, on the 13th inst. announced that the Committee, after carefully considering the evidence (some of which was reported in the *Builder*, p. 59, *ante*) before them, had decided to declare the preamble proved, subject to the embodiment in the Bill of certain suggestions contained in several resolutions which they had arrived at. The conditions which the Committee attach to the passing of the preamble are:—

(1) That the burrowing powers of clause 10 should only be exercised in the event of the scheme for the completion of the new street not being agreed upon within eight months of the passing of this Act; (2) that if these powers are exercised, they should be confined to the portions of the line which were intended to be affected by the construction of the new street; (3) that the exercise of such powers should be guarded by the insertion of a clause enabling the assessing authority to determine whether in each particular case they can be exercised without material detriment to the property which they affect; (4) that the right of appeal from the assessing authority to a Divisional Court of the High Court of Justice should extend to the question whether the exercise of the powers under clause 10 can be effected without material detriment to the property affected; (5) that the right to compensation—to be estimated once for all—for injury to trade by the exercise of such powers should be recognised by the Act; (6) that the section in the Act of 1879 providing for compensation for "recurring injuries" should be considered applicable to recurring injuries caused by the exercise of the powers sought under Clause 10; (7) that a power analogous to the power given by the Act of 1879, section 14, to the owner, lessee, or occupier, in the case of underpinning, of obtaining directions with regard to the mode of underpinning from an engineer, to be agreed upon or to be appointed by the President of the Board of Trade, shall be extended to cases where the powers sought by Clause 10 are exercised; (8) that the powers of deviation sought by Clause 5 shall not be exercised in case the new street is agreed upon within eight months of the passing of this Act, nor shall they be exercised to the west of the junction of King William-street and Cannon-street, nor to the east of the eastern limit of the proposed new street; (9) that the power of taking additional lands, and the extension to such lands of Section 42 of the Act of 1879 shall not be exercisable in case the intended new street is agreed upon within eight months of the passing of this Act.

Matheson & Grant's Engineering Trades Report says:—"The improvement in trade which appeared last autumn, and which at the time of our January Report seemed likely to spread in its effects, culminated during January and February, and has since subsided. Due almost entirely to a demand from America, the extent and permanence of which was overestimated, the collapse was sudden when the demand ceased, and there is a tendency now to exaggerate and misunderstand the fall. In the engineering, as in almost all other branches of trade, the rise in values was confined to raw and partly-finished material, and those who manufactured iron and steel into articles of utility found it difficult in many cases to obtain from buyers sufficient increase in prices to defray the cost of greater production. But the progress forward which was so eagerly welcomed is not all lost. Trade is in a much sounder condition than it has been for the last four years; a slight increase in the demand would rapidly raise prices; and if the coming harvest be as good as it now promises, and if the war-cloud already looming in Turkey be dissipated, an active trade may be looked for in the autumn."

Water Supply at Penzance.—At a meeting of the Penzance Town Council, on the 14th inst., the employment of a plumber to inspect the water-taps and fittings was reported to have resulted in reducing the consumption of water in the Market Jew-street district from 80 gallons per head per day to 40 gallons, and in the Folly district from 60 gallons to 30 gallons. As soon as possible the meters are to be removed, in order that the consumption in the other districts may be tested.—Mr. James, who moved the Sanitary Committee's report, embodying these facts, remarked that the present consumption was greater than they could afford in the present dry weather, and unless the inhabitants assisted the committee by the greatest possible economy, theirs would be the disagreeable task of giving an intermittent supply by day.—Mr. Coulson said the recent stringent inspection of fittings had resulted in saving 100,000 gallons of water daily, and more than 100,000 gallons could be saved in districts not yet inspected.

Sanitary Institute.—The following gentlemen have consented to act as presidents of sections at the coming congress, to open at Exeter on the 21st of September:—Section I. Sanitary Science and Preventive Medicine, Dr. De Chaumont, F.R.S., Professor of Military Hygiene at Netley. Section II. Engineering and Sanitary Construction, Mr. Robert Rawlinson, C.E., C.B. Section III. Meteorology and Geology, Sir Antonio Brady.

The Channel Tunnel.—The report of the directors of the South-Eastern Railway Company contains the following reference to this tunnel:—"The experiments made by the French engineers, after great pains and labour, tend to show that the geological measures are not only in the same position, but are of the same thickness on each side of the Channel; and the stratum known as the 'Old Grey Chalk' in England, and as the 'Craie de Rouen' in France, is impervious to water, and is without fissures. These are the foundation facts in this intereresting question, for if a tunnel can be made without pumping or timbering, and entirely, from side to side, through the grey chalk, then an apparently formidable and even hopeless work becomes matter of close calculation. As the researches of the French engineers confirm the view for years past taken on your behalf,—namely that the proper point of departure for any future tunnel is at the outcrop of the grey chalk on the South-Eastern line between Folkestone and Dover, and not at St. Margaret's Bay to the east of Dover, where the grey chalk, dipping to the northward, does not crop out,—your directors have deemed it advisable to make arrangements for a series of important experiments which, so far, have shown favourable results."

The National Providence League.—The first annual meeting of the above society (formed for the Promotion of National Insurance), was held July 15th, at the office, 10, Lancaster House, Savoy. The chair was taken by Earl Brownlow. The balance-sheet showed a receipt of 612*l.* 7*s.*, against an expenditure of 412*l.* 14*s.* 3*d.*, leaving a balance to carry forward of about 200*l.* The report congratulated the members on the great and growing progress made by the cause in public opinion, especially as evidence of the fact that, though the proposal of National Insurance has been advocated and debated during the last twelve months on some thirty public occasions, it has never yet been made the subject of an adverse vote.

Monument to King Leopold I. of Belgium.—In connexion with the celebration of the Jubilee of Belgium Independence, a monument erected at Laeken, near Brussels, in memory of King Leopold I., was unveiled by the King on Wednesday last. The monument, which is of white sandstone, bears some resemblance to the Albert Memorial in Hyde Park. Its architecture belongs to the most florid fourteenth-century Gothic. The monument is erected on an elevated plateau. The statue of the deceased king, by William Geefs, of white marble, represents him in an easy attitude and in a general's uniform. The figure is placed under a dome supported by eight pointed arches, forming a circular gallery, from which springs a tall spire. The architect of the monument is M. de Curte.

St. Andrew's Church, Plymouth.—A new front of open carved oakwork has just been placed before the sedilia standing in the sacrarium of St. Andrew's Church, Plymouth. In design it is of similar character to the neighbouring stalls and bishop's throne. The front forms also a prayer-desk for the three clergymen, for whose use the sedilia is provided. Its standards are richly carved, and the front, which is of deeply-moulded and traceried work, is interspersed with carving. It was designed by Messrs. G. G. & J. O. Scott, and made by Mr. Harry Hems.

Rowland Hill Memorial.—The Post-office authorities have declined to allow a statue of Sir Rowland Hill to be erected under the portico of the General Post Office, St. Martin's-le-Grand, the space not being sufficient. The committee have determined to apply to the Court of Sewers for permission to erect the statue in the open space at the south-east corner of the Royal Exchange, facing Cornhill. Dean Stanley has consented to the erection of a memorial in Westminster Abbey near Sir R. Hill's grave.

The Institute of Art.—This institution, which has its rooms at 9, Conduit-street, is established for the purpose of encouraging artwork of every kind and for facilitating its sale. It is now the scene of a special exhibition, which includes the work for the most part of amateurs.

New Hospital, Ayr.—A new hospital is to be erected in Ayr, and the work is to be commenced immediately. The length of the buildings is to be 240 ft. and the depth 120 ft., with a central tower 65 ft. high. Mr. Murdoch, Ayr, is the architect.

Surrey Archæological Society. — The annual general meeting of this Society took place on Wednesday last, the 21st inst., at its Council-room, 8, Dane's Inn, Strand. Major Heales, F.S.A., occupied the chair, supported by Messrs. C. H. Cooke, F.R.I.B.A., Ralph Nevill, F.S.A., A. J. Style, &c. The report of the Council and balance-sheet were confirmed. Among other matters the report regretted the death of Mr. Planché, who was an honorary member of the Society. The retiring members of the Council, the auditors (Messrs. J. T. Lacey and W. F. Potter), and the honorary secretary (Mr. Thomas Milbourn) were unanimously re-elected. It was announced that the annual excursion would take place on Friday, the 30th instant, to Farnham, Waverley Abbey, and Farnham Castle, under the presidency of the Bishop of Winchester.

Ashmole's House, South Lambeth.—A correspondent writes:—"This historical house, in the South Lambeth-road, is about to be pulled down, though the efforts of the Society for the Protection of Ancient Buildings have not been wanting to stay its demolition. It was once the residence of the Tradescants, distinguished naturalists, whose collection formed the foundation of the Ashmolean Museum at Oxford. On the death of Mr. Tradescant, in 1653, the house came into the possession of the Ashmole family. In a short time it will be a thing of the past, and known only in history." It is suggested that, if no other record of the site is forthcoming, some tablet ought to be put up to remind future generations of the associations of the spot.

School of Art, South Kensington.—In the concluding lecture of the present course on "Art History," Dr. Zerffi, on Tuesday last, gave some interesting statistics with reference to the growth of the attendances at these lectures. Dr. Zerffi, in 1869, commenced to lecture to an audience of *seven*. Since then he has delivered no fewer than 446 lectures, attended on an average by 70 persons, making a total of 31,220 attendances. The present course of 40 lectures was attended by 3,600 persons, making an average of 90 per lecture. This affords satisfactory proof of the gradual spread of the taste for the study of the historical development of art.

London Fever Hospital.—We would aid an appeal that is being made to the public for funds in order to carry on the work of this hospital. The small invested capital of the hospital is fast disappearing, and if fresh funds be not forthcoming, in four, or at most five, years' time it will have to be closed, and a work which for eighty years has conferred the greatest benefit on London will come to an end. The aims of this hospital are preventive as well as remedial, and on this ground alone it may well appeal to the public, to whom it thus renders such invaluable services. The building was illustrated in our vol. vi., pp. 390-391.

Children's Home, Edgeworth, near Bolton.—Two corner-stones of a new school, in connexion with this institution, were laid, on the 6th inst., by Mr. Richard Bealey, J.P., of Radcliffe, and Mr. Henry Mathwin, B.A., Southport. The building, which is to be of stone, is being erected from designs prepared by Mr. Thomas Ormrod, architect, Bolton, and will comprise school-room and two class-rooms to accommodate about 263 scholars, at an estimated cost of about 1,200*l.*, including boundary-walls and out-buildings, &c. Messrs. Martin, Brothers, of Edgeworth, are the contractors for the building.

Sunday Art Exhibitions.—In addition to the Sunday opening of the Grosvenor Gallery, the Sunday Society has arranged for opening the Annual Exhibition of the Society of British Artists at Suffolk-street, Pall-mall East, next Sunday and the following Sunday.

Collapse of a Submarine Tunnel.—A telegram from New York, dated July 21, states that a shaft of a tunnel now in course of construction in Jersey City, under the Hudson River, fell in that morning. Twenty-two men were buried, and no hopes were entertained of rescuing them.

Value of Land in the City.—At the Auction Mart, on the 14th inst., Messrs. Edwin Fox & Bousfield sold, by direction of the First Commissioner of her Majesty's Works, premises in Seething-lane, Tower-street, at 4*l.* 17*s.* 4*d.* per square foot, or at the rate of 211,992*l.* per acre.

A New Paris Exchange.—It has been determined to petition the City of Paris to erect a new commercial exchange such as those to be found in London, Liverpool, Hamburg, and other cities.

An Industrial Exhibition at Leicester was, on Monday last, opened by General Burnaby, M.P., who remarked that the real prosperity of this country depended upon the sustained activity and excellence of its productive industries, and not upon that of mere selling, buying, and speculating, which, however useful in a secondary sphere, does not increase the store of man's necessaries.

TENDERS

For furniture warehouse, 204, Great Portland-street, and 72, Bolsover-street. Mr. William Wallace, architect. Quantities by Mr. F. Thomson:—

Watson Bros.	£1,250 0 0
Perkins	1,215 0 0
Toms	1,189 0 0
Richardson Bros.	1,089 0 0
Dowsing & Sons	1,020 0 0
White	970 0 0
Hunt (accepted)	967 0 0

For repairs, decorations, &c., to house, stabling, vinery, and Lodge, at Gilling Lodge, Haverstock-hill, for Mrs. Wilson. Mr. E. Crosse, architect:—

Hambling (accepted)	£293 0 0

For two new wool-stores, 140, Abbey-street, Bermondsey, for Mr. W. Wilkins. Mr. E. Crosse, architect:—

Bambery	£464 0 0
Brockwell	420 0 0
Downs & Co.	420 0 0
Almond	370 0 0
Preston	353 0 0
Wells (accepted)	350 0 0

For the Congleton Water Works:—

	Contract No. 1.	Contract No. 2.	Contract No. 3.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Poole	—	—	1,710 0 0	1,710 0 0
Mackay	2,725 0 0	7,164 10 0	1,876 10 0	11,766 0 0
Drewitt & Pickering, Stoke	2,450 0 0	6,661 15 0	1,782 8 2	10,894 3 2
Biggs, Cardiff	2,280 0 0	6,250 0 0	1,600 0 0	10,130 0 0
Kirk, Congleton*	2,230 0 0	6,160 0 0	1,673 0 0	*10,063 0 0
Hunter	1,806 5 2	5,403 7 4	908 13 8	8,118 6 2

* Accepted.

No. 4.—*Pumping Machinery.*

Gwynne	£2,783 0 0
Turner	1,825 0 0
Atlas Engine Co.	1,815 0 0
Toden	1,800 0 0
Hydraulic Engineering Co.	1,730 0 0
Scragg (recommended)	1,586 0 0
Butterley Co.	1,500 0 0
Barker & Cope	1,250 0 0
Sylvester & Sainsbury	1,201 0 0

For the erection of a church at Llawryglyn, in the parish of Trefeglwys, Montgomeryshire. Messrs. Jones & Parke, architects. Quantities not supplied:—

Hamer, Newtown	£1,470 0 0
Fisher & Co., Welshpool	1,200 0 0
Owen, Llanidloes	1,166 0 0
Jones, Trefeglwys	975 0 0
Williams, Newtown (accepted)	930 0 0

For three cottages for Mr. R. Lloyd, jun., Newtown. Messrs. Jones & Parke, architects. Quantities supplied:—

Davies, Newtown	£310 0 0
E. Williams, Newtown	295 5 4
Morris & Sons, Newtown	295 0 0
J. Williams, Newtown	287 0 0

For alterations to 20 and 21, East-street, Brighton, for Mr. W. D. Stewart. Mr. George Edwards, architect:—

Martin, Wells, & Co.	£1,524 0 0
Kemp	1,497 0 0
Stimpson & Co.	1,483 0 0
Nash & Co.	1,467 0 0
Richardson	1,150 0 0
Barnes	1,070 0 0
Garrett	1,045 0 0
Wright	996 0 0
White (accepted)	873 0 0

For two shops and dwelling-houses, Burgess Hill, Sussex, for Mr. Alderman Cox. Messrs. Scott & Hyde, architects. Quantities by Mr. F. W. Hyde:—

Andrews	£1,893 0 0
Hollands	1,800 0 0
Cheeseman & Co.	1,795 0 0
Patching	1,757 0 0
Lockyer	1,730 0 0
Norman	1,677 0 0
Cooper	1,620 0 0

For the erection of house and sale shop, Old Basford, Nottingham. Mr. Herbert Walker, architect. Quantities supplied:—

Hind	£656 0 0
Andrew	579 0 0
Clarke	566 0 0
Raven	562 0 0
Holdsworth	560 0 0
Morrison	560 0 0
Scott	560 0 0
Bains & Turton	557 0 0
McCulloch	550 10 0
Woolf Bros.	545 0 0
Hopewell & Son	540 0 0
Noble	518 0 0
Stainforth	499 10 4
Price (accepted)	463 1 6
Bailey*	462 10 0

* Withdrawn in consequence of mistake.

For building station-masters' houses at Shoreham and Kemsing, Kent, for the London, Chatham, and Dover Railway Company:—

Wiltshire, Sevenoaks (accepted).

For erecting premises, North End, Croydon, for Messrs. Batchelar & Son. Mr. R. W. Price, architect. Quantities by Mr. W. H. Barber:—

Downs	£4,983	0	0
Nightingale	4,943	0	0
Ward	4,937	0	0
Marriage	4,750	0	0
Smith	4,669	0	0
Hart	4,620	0	0
McLachlan & Sons	4,584	0	0
Taylor	4,490	0	0

For two villa residences, Crouch End, for Mr. A. B. Smith. Mr. Edward J. Paine, architect:—

Goodman	£3,521	0	0
Holmes & Son	3,336	0	0
Conder	3,312	0	0
L. H. & R. Roberts	3,147	0	0
Harper	2,965	0	0
King	2,920	0	0
Mattock Bros.	2,760	0	0

For concrete foundations for villa residence, for Mr. Pettie, R.A., Hampstead. Mr. William Wallace, architect. Quantities supplied by Mr. Frederick Thomson:—

Toms	£210	0	0
Brass	197	0	0
Woodward	195	0	0
Manby	187	0	0
Scrivener & Co.	178	0	0
White	168	0	0
Cox	160	0	0
Hunt	152	0	0

For rebuilding the "King's Arms" public-house, Church-street, Deptford. Mr. W. T. Hunt, jun., architect:—

Jerrard	£1,543	0	0
Hubble	1,429	0	0
Rodwell & Smith	1,375	0	0
A. & F. Smith	1,340	0	0
Redman	1,280	0	0
Newman	1,280	0	0
Holloway (accepted)	1,247	0	0

For alterations and additions to Cecil House College, Beulah-hill, Upper Norwood, for Miss A. Bowra. Mr. Rawlings E. C. Fittock, architect. Quantities supplied by Mr. Elliott Hope, jun.:—

Wheeler	£595	0	0
Joselyne	556	0	0
Wright	535	0	0
Wilkinson	485	0	0
Cutting, Notting-hill	479	0	0

For erection and completion of a villa residence, for Mr. T. Cullen, in the Underhill-road, Lordship-lane. Quantities not supplied:—

Watson & Dennett, Dulwich (accepted)	£1,050	0	0

For alterations to house and erection of workshop at rear, 17, Albany-road, Old Kent-road, for Mr. V. G. Daws. Mr. E. Crosse, architect:—

Amery	£340	0	0
Battley	334	0	0
Roffey	315	0	0
Everitt	304	0	0
Smithers (accepted)	278	0	0

For the erection of St. Mary's Vicarage, corner of Upper Rock Gardens, Brighton. Mr. Spencer W. Grant, architect:—

Lynn & Sons, Brighton (accepted)	£2,800	0	0

For house and shop, Murchison-road, Notting-hill, for Mr. G. H. White. Mr. J. Dunn, architect. Quantities by Messrs. Nixon & Raven:—

Buckle	£1,693	0	0
Green	1,593	0	0
Weymouth	1,550	0	0
Phillips	1,345	0	0

For new road and drains adjoining above site:—

Parkhouse	£432	12	0
Neal Bros.	415	0	0
Stockwell	333	0	0

For the redecoration and improvements to Whitefield's Tabernacle, Tottenham Court-road. Mr. Alfred Burr, architect:—

Richardson Bros.	£1,848	0	0
Perkins	1,733	0	0
Bywaters (accepted)	1,593	0	0

For new organ:—

Bishop & Son (accepted)	£498	0	0

For repairs and alterations to 22 and 23, Newcastle-street, Strand, for Mr. George Shenton. Messrs. Ebbetts & Cobb, architects:—

Steel Brothers (accepted)	£260	0	0

For work to be done at 13, Devonshire-square, for the Jewish Board of Guardians. Messrs. Davis & Emanuel, architects:—

				New Sashes		
Croker	£354	0	0	£34	0	0
Gold & Beard	463	0	0	24	0	0
Williams	430	0	0	38	0	0
Heeps	407	0	0	20	0	0
Roberts (accepted)	385	0	0	20	0	0

For the erection of house, at Acton, for Mr. H. Wright. Mr. Edwd. Monson, jun., architect:—

Brunsden	£678	0	0
Baker	630	0	0
Poffley	613	0	0
Eydmann	595	0	0
Beck (accepted)	584	0	0

TO CORRESPONDENTS.

Domes.—The assertion is incorrect. The Albert Hall dome is 219 ft. one way, and 185 ft. the other. The central dome of the Vienna Exhibition Building was 333 ft. in diameter. The Philadelphia Exhibition included domed pavilions each 240 ft. in diameter.

Surveyor (it is the *section* of the ties in question which is registered; not the ties themselves).—W. E. P. (try the Colonial Department).—J. F. (we cannot adjudicate on personal differences, on *ex parte* evidence).—J. B. Winchester (the statement is not very clear; as taxes are usually imposed in advance, there would seem to be no hardship).—F. T.—G. M.—M. G.—No. I.—E. C.—G. H.—E. S. H.—Col. F. P.—J. & P.—H. H.—Mr. R.—E. C.—G. S & Co.—C. P.—B.—J. B.—H. C. C.—A. L.—N. & R.—P. G. S.—Dr. P.—J. L. R.—F. W. H.—S. W. G.—W. E.—S. & M.—J. R. V.—T. D. B & Son—D. W.—Dr. Z.—W. E. H.—G. & G.—J. J. A.—A. B.—J. W. H.—E. & C.—N. H. J. W.

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

We are compelled to decline pointing out books and giving addresses.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course with the authors.

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